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NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 JAN 17 Pre-1988 INPI data added to MARPAT
NEWS 4 FEB 21 STN AnaVist, Version 1.1, lets you share your STN AnaVist
visualization results
NEWS 5 FEB 22 The IPC thesaurus added to additional patent databases on STN
NEWS 6 FEB 22 Updates in EPFULL; IPC 8 enhancements added
NEWS 7 FEB 27 New STN AnaVist pricing effective March 1, 2006
NEWS 8 MAR 03 Updates in PATDPA; addition of IPC 8 data without attributes
NEWS 9 MAR 22 EMBASE is now updated on a daily basis
NEWS 10 APR 03 New IPC 8 fields and IPC thesaurus added to PATDPAFULL
NEWS 11 APR 03 Bibliographic data updates resume; new IPC 8 fields and IPC
thesaurus added in PCTFULL
NEWS 12 APR 04 STN AnaVist \$500 visualization usage credit offered
NEWS 13 APR 12 LINSPEC, learning database for INSPEC, reloaded and enhanced
NEWS 14 APR 12 Improved structure highlighting in FQHIT and QHIT display
in MARPAT
NEWS 15 APR 12 Derwent World Patents Index to be reloaded and enhanced during
second quarter; strategies may be affected
NEWS 16 MAY 10 CA/CAPLUS enhanced with 1900-1906 U.S. patent records
NEWS 17 MAY 11 KOREAPAT updates resume
NEWS 18 MAY 19 Derwent World Patents Index to be reloaded and enhanced
NEWS 19 MAY 30 IPC 8 Rolled-up Core codes added to CA/CAPLUS and
USPATFULL/USPAT2
NEWS 20 MAY 30 The F-Term thesaurus is now available in CA/CAPLUS
NEWS 21 JUN 02 The first reclassification of IPC codes now complete in
INPADOC

NEWS EXPRESS FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
<http://download.cas.org/express/v8.0-Discover/>

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NEWS IPC8 For general information regarding STN implementation of IPC 8
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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 19:14:15 ON 23 JUN 2006

=> FILE REG

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SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 19:14:32 ON 23 JUN 2006

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STRUCTURE FILE UPDATES: 22 JUN 2006 HIGHEST RN 889059-26-1

DICTIONARY FILE UPDATES: 22 JUN 2006 HIGHEST RN 889059-26-1

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TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

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*****
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005. A new display format, IDERL, is now      *
* available and contains the CA role and document type information.  *
*
*****
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> S METHACRYLIC ACID/CN

L1 1 METHACRYLIC ACID/CN

=> D

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN

RN 79-41-4 REGISTRY

ED Entered STN: 16 Nov 1984

CN 2-Propenoic acid, 2-methyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN **Methacrylic acid (8CI)**

OTHER NAMES:

CN α -Methacrylic acid

CN α -Methylacrylic acid

CN 2-Methyl-2-propenoic acid

CN 2-Methylacrylic acid

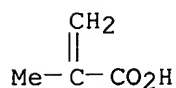
CN Acrylester MAA

CN GE 110

CN Light Ester A

CN Loctite 3298

CN Methylacrylic acid
 CN Norsocryl MAA
 CN NSC 7393
 FS 3D CONCORD
 DR 463311-95-7, 562836-84-4
 MF C4 H6 O2
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

23214 REFERENCES IN FILE CA (1907 TO DATE)
 11916 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 23242 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> S 79-41-4/CRN
 L2 46112 79-41-4/CRN

=> S ACRYLIC ACID/CRN
 L3 0 ACRYLIC ACID/CRN

=> S ACRYLIC ACID/CN
 L4 1 ACRYLIC ACID/CN

=> D

L4 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN

RN 79-10-7 REGISTRY

ED Entered STN: 16 Nov 1984

CN 2-Propenoic acid (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN **Acrylic acid (6CI, 7CI, 8CI)**

OTHER NAMES:

CN Acroleic acid

CN Ethylenecarboxylic acid

CN NSC 4765

CN Propenoic acid

CN Vinylformic acid

FS 3D CONCORD

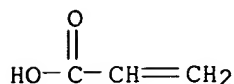
DR 55927-87-2

MF C3 H4 O2

CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE,

TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

39425 REFERENCES IN FILE CA (1907 TO DATE)
22479 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
39484 REFERENCES IN FILE CAPLUS (1907 TO DATE)
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> S 79/10/7/CRN
L5 0 79/10/7/CRN

=> S 79-10-7/CRN
L6 59563 79-10-7/CRN

| => FILE CAPLUS | SINCE FILE | TOTAL |
|----------------------|------------|---------|
| COST IN U.S. DOLLARS | ENTRY | SESSION |
| FULL ESTIMATED COST | 14.20 | 14.41 |

FILE 'CAPLUS' ENTERED AT 19:15:44 ON 23 JUN 2006
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FILE LAST UPDATED: 22 Jun 2006 (20060622/ED)

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=> S(NOvolak or novalak or novolac or novolak) or ((phenol cresol) AND (aldehyde formaldehyde))
S(NOVOLAK IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> S (NOvolak or novalak or novolac or novolak) or ((phenol cresol) AND (aldehyde formaldehyde))
25763 NOVOLAK

128 NOVALAK
 2252 NOVOLAC
 25763 NOVALAK
 241974 PHENOL
 55190 CRESOL
 841 PHENOL CRESOL
 (PHENOL(W)CRESOL)
 105466 ALDEHYDE
 140764 FORMALDEHYDE
 51 ALDEHYDE FORMALDEHYDE
 (ALDEHYDE(W) FORMALDEHYDE)
 L7 26806 (NOVOLAK OR NOVALAK OR NOVOLAC OR NOVOLAK) OR ((PHENOL CRESOL)
 AND (ALDEHYDE FORMALDEHYDE))

=> D HIS

(FILE 'HOME' ENTERED AT 19:14:15 ON 23 JUN 2006)

FILE 'REGISTRY' ENTERED AT 19:14:32 ON 23 JUN 2006

L1 1 S METHACRYLIC ACID/CN
 L2 46112 S 79-41-4/CRN
 L3 0 S ACRYLIC ACID/CRN
 L4 1 S ACRYLIC ACID/CN
 L5 0 S 79/10/7/CRN
 L6 59563 S 79-10-7/CRN

FILE 'CAPLUS' ENTERED AT 19:15:44 ON 23 JUN 2006

L7 26806 S (NOVOLAK OR NOVALAK OR NOVOLAC OR NOVOLAK) OR ((PHENOL CRESOL

=> S L1 OR L4

23242 L1

39484 L4

L8 53490 L1 OR L4

=> S L8 AND L7

L9 592 L8 AND L7

=> S L9 AND ACETAL

49047 ACETAL

L10 2 L9 AND ACETAL

=> D ALL 1-2

L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:57528 CAPLUS
 DN 142:144115
 ED Entered STN: 21 Jan 2005
 TI Manufacture of planographic printing plates with excellent scratch and
 chemical resistance
 IN Maemoto, Kazuo; Watanabe, Noriaki
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 53 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G03F007-00
 ICS G03F007-004; G03F007-032; G03F007-11; G03F007-38
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 38

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | JP 2005017599 | A2 | 20050120 | JP 2003-181121 | 20030625 |
| PRAI | JP 2003-181121 | | 20030625 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| JP 2005017599 | ICM | G03F007-00 |
| | ICS | G03F007-004; G03F007-032; G03F007-11; G03F007-38 |
| | IPCI | G03F0007-00 [ICM,7]; G03F0007-004 [ICS,7]; G03F0007-032 [ICS,7]; G03F0007-11 [ICS,7]; G03F0007-38 [ICS,7] |
| | IPCR | G03F0007-00 [I,A]; G03F0007-00 [I,C*]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-032 [I,A]; G03F0007-032 [I,C*]; G03F0007-11 [I,A]; G03F0007-11 [I,C*]; G03F0007-38 [I,A]; G03F0007-38 [I,C*] |
| | FTERM | 2H025/AA12; 2H025/AA13; 2H025/AB03; 2H025/AC08; 2H025/AD03; 2H025/CB13; 2H025/CB14; 2H025/CB29; 2H025/CB52; 2H025/CC03; 2H025/CC20; 2H025/DA36; 2H025/FA01; 2H025/FA03; 2H025/FA17; 2H096/AA07; 2H096/AA08; 2H096/BA09; 2H096/BA16; 2H096/BA20; 2H096/CA05; 2H096/DA10; 2H096/EA04; 2H096/GA08; 2H096/JA02 |

AB The plates are manufactured by these steps; applying undercoat compns. containing

water-insol. and alkali-soluble resins (A; e.g., acrylic, urethane, or **acetal** resins) on hydrophilic supports, applying upper coatings containing water-insol. and alkali-soluble resins and development inhibitors

and

increasing solubility in aqueous alkali solns. upon exposure, and bringing the coating surface into contact with OH-bearing compds. The upper coatings may contain A-insolubilizing solvents.

ST planog printing plate scratch chem resistance; bilayer presensitized lithog platemaking dissoln rate gradient; cresol **novolak** moisture hardening lithog platemaking

IT Polyvinyl acetals

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(formals, Vinylec B 2, trimellitate, underlayers; platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

IT Phenolic resins, processes

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(**novolak**, cresol-based, uppercoat layers; platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

IT Lithographic plates

(presensitized; platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

IT Acrylic polymers, uses

Polyurethanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(underlayers; platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

IT 825627-83-6

RL: CPS (Chemical process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(development inhibitors, uppercoat layers; platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(monomers; platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

IT 7732-18-5, Water, uses

RL: NUU (Other use, unclassified); USES (Uses)

(platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

IT 63-74-1, p-Aminobenzenesulfonamide 79-41-4, Methacrylic acid, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

IT 11146-28-4 37321-70-3, AA 1050
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrates; platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

IT 552-30-7DP, Trimellitic anhydride, esters with polyvinyl acetals
 85023-20-7P, 2,2-Bis(hydroxymethyl)propionic acid-MDI copolymer
 124996-93-6P, Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl methacrylate copolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (underlayers; platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

IT 321963-43-3
 RL: TEM (Technical or engineered material use); USES (Uses)
 (underlayers; platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (uppercoat layers; platemaking on bilayer presensitized lithog. plates exhibiting graded dissoln. rate against developers)

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1985:462588 CAPLUS

DN 103:62588

ED Entered STN: 24 Aug 1985

TI Photosensitive peel-off film

PA Sanyo-Kokusaku Pulp Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03C001-80

ICS G03C005-00; G03F001-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 60043652 | A2 | 19850308 | JP 1983-151208 | 19830819 |
| | JP 03026824 | B4 | 19910412 | | |
| PRAI | JP 1983-151208 | | 19830819 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|---|
| JP 60043652 | ICM | G03C001-80 |
| | ICS | G03C005-00; G03F001-00 |
| | IPCI | G03C0001-80 [ICM,4]; G03C0005-00 [ICS,4]; G03F0001-00 [ICS,4] |
| | IPCR | G03C0001-91 [I,A]; G03C0001-91 [I,C*] |

AB The material is composed of a transparent support, a colored polymer film layer which is composed of poly(vinyl formal) resin, polyester resin cosol. with poly(vinyl formal) resin, and opaque dye or pigment, and a photosensitive resist layer. The claim also includes the material having an addnl. layer, between the support and the polymer layer, another resin layer mainly composed of alc.-soluble polyamide resin and opaque pigment or dye. The material improves the workability of the masking process,

providing ease of peeling and good etching property. Thus, 2 compns. were prepared, each containing (1) vinyl formal resin (containing poly(vinyl formal) resin 82, poly(vinyl alc.) 6, and poly(vinyl acetate) 12%) 75, polyester resin (terephthalic acid 25, isophthalic acid 25, and 1,4-butanediol 50 mol%) 25, Neozapon Red 20 parts, and solvents and (2) alkali-soluble phenol-**novolak** resin 5, same resin esterified with 1,2-naphthoquinonediazide-5-sulfonyl chloride 10 parts, and solvents. A poly(ethylene terephthalate) film was coated with the 1st composition, dried, and then with the 2nd composition to obtain a photosensitive material. The material was imagewise exposed to UV and treated with an etching solution to dissolve the layers in the exposed part. The etching solution contained Na salicylate 35, NaOH 0.3, and H2O 64.7 parts. The film formed showed high strength and small elongation so that peeling was easy. No premature separation of the film from the support was observed

ST photoresist peel off masking; printing photomech process masking film
IT Printing plates
 (photoresist multilayer assemblies for preparation of, with polymer interlayer for improved masking property)
IT Acrylic polymers, uses and miscellaneous
Phenolic resins, uses and miscellaneous
RL: USES (Uses)
 (photoresist multilayer assembly with layer containing, for improved workability of masking process)
IT Vinyl **acetal** polymers
RL: USES (Uses)
 (formals, photoresist multilayer assembly with layer containing, for improved workability of masking process)
IT Resists
 (photo-, polymer interlayer for masking material containing layer of)
IT 3770-97-6D, reaction products with **novolak** resin
RL: USES (Uses)
 (photoresist assembly with photosensitive layer containing)
IT 20237-98-3
RL: USES (Uses)
 (photoresist assembly with photosensitive layer containing, for masking process)
IT **79-10-7D**, polymers with acrylic ester 9002-89-5 9003-20-7
12227-55-3 30580-17-7 97568-28-0
RL: USES (Uses)
 (photoresist multilayer assembly with layer containing, for improved workability of masking process)

=> S L9 AND POLYACETAL

3283 POLYACETAL

L11 0 L9 AND POLYACETAL

=> S L9 AND PHOTOACID

3492 PHOTOACID

L12 6 L9 AND PHOTOACID

=> D ALL 1-6

L12 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:467817 CAPLUS

DN 143:8578

ED Entered STN: 02 Jun 2005

TI Silsesquioxane-based compositions for production of flexible optical waveguides

IN Shelnut, James G.; Pugliano, Nicola; Moynihan, Matthew L.; Zheng, Hai Bin

PA Rohm and Haas Electronic Materials, L.L.C., USA

SO Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C09D183-04
ICS C08L083-04; G02B006-00
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 73

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|------------------|----------|
| PI | EP 1535977 | A1 | 20050601 | EP 2004-257060 | 20041115 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR, IS, YU | | | | |
| | JP 2005154715 | A2 | 20050616 | JP 2004-95483 | 20040329 |
| | US 2005141839 | A1 | 20050630 | US 2004-993069 | 20041119 |
| | CN 1773313 | A | 20060517 | CN 2004-10095048 | 20041124 |
| PRAI | US 2003-524820P | P | 20031125 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|---|
| EP 1535977 | ICM | C09D183-04 |
| | ICS | C08L083-04; G02B006-00 |
| | IPCI | C09D0183-04 [ICM,7]; C08L0083-04 [ICS,7]; C08L0083-00 [ICS,7,C*]; G02B0006-00 [ICS,7] |
| | IPCR | C08L0083-00 [I,C*]; C08L0083-04 [I,A]; C09D0183-04 [I,A]; C09D0183-04 [I,C*]; G02B0006-00 [I,A]; G02B0006-00 [I,C*] |
| JP 2005154715 | ECLA | G02B006/122C; G02B006/138 |
| | IPCI | C08L0083-04 [ICM,7]; C08L0083-00 [ICM,7,C*]; C08K0005-00 [ICS,7]; G02B0006-12 [ICS,7]; G02B0006-13 [ICS,7] |
| | IPCR | C08L0083-00 [I,C*]; C08L0083-04 [I,A]; C09D0183-04 [I,A]; C09D0183-04 [I,C*]; G02B0006-00 [I,A]; G02B0006-00 [I,C*] |
| | FTERM | 2H047/KA04; 2H047/LA12; 2H047/PA02; 2H047/PA22; 2H047/PA28; 2H047/QA05; 2H047/TA00; 4J002/CC042; 4J002/CF112; 4J002/CH052; 4J002/CJ002; 4J002/CK022; 4J002/CL072; 4J002/CN032; 4J002/CP031; 4J002/CP072; 4J002/EC047; 4J002/EC057; 4J002/EE036; 4J002/EJ037; 4J002/EJ047; 4J002/EN106; 4J002/EN116; 4J002/EN136; 4J002/EQ036; 4J002/ET006; 4J002/EU186; 4J002/EV246; 4J002/EV286; 4J002/EV296; 4J002/EV346; 4J002/EW176; 4J002/FD200; 4J002/FD202; 4J002/FD206; 4J002/FD207; 4J002/GQ00 |
| US 2005141839 | IPCI | G02B0006-38 [ICM,7]; G02B0006-10 [ICS,7]; H01L0021-31 [ICS,7]; H01L0021-469 [ICS,7]; H01L0021-02 [ICS,7,C*] |
| | IPCR | G02B0006-10 [I,A]; G02B0006-10 [I,C*]; G02B0006-38 [I,A]; G02B0006-38 [I,C*]; H01L0021-02 [I,C*]; H01L0021-31 [I,A]; H01L0021-469 [I,A] |
| | NCL | 385/129.000 |
| CN 1773313 | IPCI | G02B0001-04 [I,A]; G02B0001-00 [I,A]; G02B0006-02 [I,A]; G02B0006-13 [I,A] |

AB A composition comprises (a) a polymer comprising units of the formula (RSiO_{1.5}), where R is a substituted or unsubstituted organic group, and a plurality of functional end groups, (b) a first component for altering the solubility of the composition in a dried state upon activation, and (c) a second component containing a plurality of functional groups selected from hydroxy, amino, thiol, sulfonate ester, carboxylate ester, silyl ester, anhydride, aziridine, methylolmethyl, silyl ether, and combinations of these groups, the second component being present in an effective amount to improve flexibility of the composition in a dried state before and after activation. The composition is used for production of core and/or clad parts of flexible optical waveguides. Thus, propylene glycol monomethyl ether acetate (40.74), phenyl-methyl-dimethyl silsesquioxane (49/49/2, 53.76), polytetrahydrofuran (5.38), diphenylnaphthylsulfonium perfluorobutanesulfonate (0.11), and silicone oil Silwet L 7604 (0.01%)

were mixed, the composition was coated onto a copper clad laminate (substrate), and dried in an oven at 90° for 30 min. A pattern for forming waveguides was placed on the dried composition, and the coated laminate was exposed to 500 mJ and placed in an oven at 90° for 15 min. The exposed laminate was dipped in a 0.7 N sodium hydroxide developer solution at 37.8° for 30 s, rinsed in deionized water, dried, and heated to 200° for 60 min in an oven to obtain a flexible waveguide.

- ST silsesquioxane **photoacid** catalyst compn flexible optical waveguide
- IT Silsesquioxanes
 RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses)
 (fluorine-containing; silsesquioxane-based compns. for production of flexible optical waveguides)
- IT Polyethers, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (hydroxy-terminated; silsesquioxane-based compns. for production of flexible optical waveguides)
- IT Phenolic resins, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (**novolak**; silsesquioxane-based compns. for production of flexible optical waveguides)
- IT Silsesquioxanes
 RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses)
 (polysiloxane-; silsesquioxane-based compns. for production of flexible optical waveguides)
- IT Fluoropolymers, uses
 Polysiloxanes, uses
 RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses)
 (silsesquioxane-; silsesquioxane-based compns. for production of flexible optical waveguides)
- IT Nanoparticles
 Optical waveguides
 (silsesquioxane-based compns. for production of flexible optical waveguides)
- IT Silsesquioxanes
 RL: DEV (Device component use); POF (Polymer in formulation); TEM
 (Technical or engineered material use); USES (Uses)
 (silsesquioxane-based compns. for production of flexible optical waveguides)
- IT Aromatic hydrocarbons, uses
 Ethers, uses
 Fullerenes
 Hydrocarbons, uses
 Polyesters, uses
 Polyimides, uses
 Polyketones
 Polyoxyalkylenes, uses
 Polysulfones, uses
 Polyurethanes, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (silsesquioxane-based compns. for production of flexible optical waveguides)
- IT 92068-44-5, Methylsilanetriol-phenylsilanetriol copolymer 159577-36-3,
 Dimethylsilanediol-methylsilanetriol-phenylsilanetriol copolymer
 852627-33-9
 RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses)
 (assumed monomers; silsesquioxane-based compns. for production of flexible optical waveguides)
- IT 25103-87-1
 RL: MOA (Modifier or additive use); USES (Uses)
 (assumed monomers; silsesquioxane-based compns. for production of flexible optical waveguides)
- IT 1678-43-9, Benzoin tosylate 51000-42-1D, amine-blocked 57835-99-1,
 Triphenylsulfonium hexafluorophosphate 66003-78-9, Triphenylsulfonium

trifluoromethylsulfonate 176035-31-7, Triphenylsulfonium trifluoromethyl sulfate 852617-06-2

RL: CAT (Catalyst use); USES (Uses)

(silsesquioxane-based compns. for production of flexible optical waveguides)

IT 79-10-7D, Acrylic acid, esters 24936-97-8, Poly(1,4-butylene adipate) 24979-97-3, Polytetrahydrofuran 24980-41-4D, Polycaprolactone, triols 25190-06-1, Polytetrahydrofuran, sru 25248-42-4D, Poly[oxy(1-oxo-1,6-hexanediyl)], triols 25322-68-3, Poly(ethylene oxide) 25322-69-4, Poly(propylene glycol) 59269-51-1, Polyvinylphenol

RL: MOA (Modifier or additive use); USES (Uses)

(silsesquioxane-based compns. for production of flexible optical waveguides)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (3) Shipley Company LLC; EP 1251155 A 2002 CAPLUS
- (4) Sooriyakumaran, R; US 2002/090572 A1 2002

L12 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:819983 CAPLUS

DN 141:340377

ED Entered STN: 07 Oct 2004

TI Fluororesins and photosensitive compositions therewith having good ink repellency and developability

IN Takahashi, Hideyuki; Ishiseki, Kenji

PA Asahi Glass Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F290-06

ICS G03F007-038; C08G077-42

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 2004277494 | A2 | 20041007 | JP 2003-68216 | 20030313 |
| PRAI | JP 2003-68216 | | 20030313 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|---|
| JP 2004277494 | ICM | C08F290-06 |
| | ICS | G03F007-038; C08G077-42 |
| | IPCI | C08F0290-06 [ICM,7]; C08F0290-00 [ICM,7,C*]; G03F0007-038 [ICS,7]; C08G0077-42 [ICS,7]; C08G0077-00 [ICS,7,C*] |
| | IPCR | C08F0290-00 [I,C*]; C08F0290-06 [I,A]; C08G0077-00 [N,C*]; C08G0077-42 [N,A]; G03F0007-038 [I,A]; G03F0007-038 [I,C*] |
| | FTERM | 2H025/AA10; 2H025/AA13; 2H025/AA20; 2H025/AB14; 2H025/AB16; 2H025/AB17; 2H025/AC01; 2H025/AD01; 2H025/BC13; 2H025/BC42; 2H025/CA00; 2H025/CB33; 2H025/CB42; 2H025/CC17; 4J027/AF07; 4J027/BA07; 4J027/CD10; 4J246/AA03; 4J246/AB02; 4J246/AB13; 4J246/BA02X; 4J246/BA020; 4J246/BB02X; 4J246/BB020; 4J246/BB021; 4J246/CA010; 4J246/CA19X; 4J246/CA190; 4J246/CA22X; 4J246/CA220; 4J246/CA230; 4J246/CA24X; 4J246/CA240; 4J246/CA250; 4J246/CA260; 4J246/CA390; 4J246/CA400; 4J246/CA520; 4J246/CA720; 4J246/EA05; 4J246/GA01; 4J246/GC26; 4J246/HA15 |

AB The fluororesins have ≥ 2 (/group)-F-substituted $C \leq 20$ alkyls,
(B) $(SiR_1R_2O)_nSiR_1R_2R_3$ [$R_1, R_2 = H, (cyclo)alkyl, aryl; R_3 = H, C1-10$ organic
group; $n = 1-200$ integer], and acidic groups and satisfy acid value 5-300
mg-KOH/g. Compns. of the fluororesins, **photoacid** generators,
and crosslinking agents bearing two or more groups reactive with the
acidic groups of the fluororesins, are also claimed. Compns. of the
fluororesins, radical photopolymn. initiators, and compds. bearing
 ≥ 2 ethylenic double bonds and free from acidic groups, are further
claimed. These compns. provide fine patterns on ink-jet printers and are
useful for circuit-fabricating masks.

ST fluoropolysiloxane photopatternable resin compn developability ink
repellency; melamine crosslinkable polysiloxanyl fluororesin
photopatternable compn

IT Polysiloxanes, preparation
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic, fluorine-containing; photosensitive resin compns. containing
polysiloxanyl-bearing fluororesins and showing good developability and
ink repellency)

IT Fluoropolymers, preparation
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polysiloxane-; photosensitive resin compns. containing
polysiloxanyl-bearing fluororesins and showing good developability and
ink repellency)

IT Polysiloxanes, preparation
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(di-Me, mono[(methyloxopropenyl)oxy]propyl group]-terminated, X 24
8201, polymers with perfluoro(butyl)ethyl methacrylate, methacrylic
acid, and Me methacrylate; photosensitive resin compns. containing
polysiloxanyl-bearing fluororesins and showing good developability and
ink repellency)

IT Phenolic resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**novolak**, photosensitive; photosensitive resin compns. containing
polysiloxanyl-bearing fluororesins and showing good developability and
ink repellency)

IT Photoimaging materials
(photosensitive resin compns. containing polysiloxanyl-bearing fluororesins
and showing good developability and ink repellency)

IT Aminoplasts
RL: TEM (Technical or engineered material use); USES (Uses)
(photosensitive resin compns. containing polysiloxanyl-bearing fluororesins
and showing good developability and ink repellency)

IT 14159-45-6
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES
(Uses)
(WPAG 199; photosensitive resin compns. containing polysiloxanyl-bearing
fluororesins and showing good developability and ink repellency)

IT 347841-51-4
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES
(Uses)
(WPAG 367, **photoacid** generators; photosensitive resin compns.
containing polysiloxanyl-bearing fluororesins and showing good
developability and ink repellency)

IT 9003-08-1, Mycoat 325
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinking components; photosensitive resin compns. containing
polysiloxanyl-bearing fluororesins and showing good developability and
ink repellency)

IT 9016-83-5D, Cresol-formaldehyde copolymer, derivs.
RL: TEM (Technical or engineered material use); USES (Uses)
(**novolak**-type; photosensitive resin compns. containing
polysiloxanyl-bearing fluororesins and showing good developability and

ink repellency)

IT 3584-23-4, 2-(4-Methoxyphenyl)-4,6-bis(trichloromethyl)-1,3,5-triazine
 RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES
 (Uses)
 (photoacid generators; photosensitive resin compns. containing
 polysiloxanyl-bearing fluororesins and showing good developability and
 ink repellency)

IT 90-93-7, 4,4'-Bis(diethylamino)benzophenone 71868-10-5, Irgacure 907
 RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES
 (Uses)
 (photopolymn. initiators; photosensitive resin compns. containing
 polysiloxanyl-bearing fluororesins and showing good developability and
 ink repellency)

IT 79-41-4DP, Methacrylic acid, polymers with methacryloyl-terminated
 siloxanes and fluoroalkyl methacrylate 80-62-6DP, Methyl methacrylate,
 polymers with methacryloyl-terminated siloxanes and fluoroalkyl
 methacrylate 1799-84-4DP, 3,3,4,4,5,5,6,6,6-Nonafluorohexyl
 methacrylate, polymers with methacryloyl-terminated siloxanes and
 methacrylic monomers 7534-94-3DP, Isobornyl methacrylate, polymers with
 methacryloyl-terminated siloxanes and fluoroalkyl acrylate 27905-45-9DP,
 1H,1H,2H,2H-Heptadecafluorodecyl acrylate, polymers with
 methacryloyl-terminated siloxanes and methacrylic monomers 769937-09-9P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (photosensitive resin compns. containing polysiloxanyl-bearing fluororesins
 and showing good developability and ink repellency)

IT 769937-10-2P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (photosensitive resin compns. containing polysiloxanyl-bearing fluororesins
 and showing good developability and ink repellency)

IT 83045-04-9, Kayarad D 310 491570-79-7, Kayarad CCR 1115
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photosensitive resin compns. containing polysiloxanyl-bearing fluororesins
 and showing good developability and ink repellency)

L12 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:782069 CAPLUS

DN 141:285856

ED Entered STN: 24 Sep 2004

TI Developing method and solid alkaline developer for photosensitive
 lithographic plate and printing plate

IN Goto, Kiyoshi

PA Konica Minolta Holdings, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-32

ICS G03F007-00; G03F007-004

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 2004264414 | A2 | 20040924 | JP 2003-52933 | 20030228 |
| PRAI | JP 2003-52933 | | 20030228 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| JP 2004264414 | ICM | G03F007-32 |
| | ICS | G03F007-00; G03F007-004 |
| | IPCI | G03F0007-32 [ICM,7]; G03F0007-00 [ICS,7]; G03F0007-004 [ICS,7] |
| | IPCR | G03F0007-00 [I,A]; G03F0007-00 [I,C*]; G03F0007-004 |

[I,A]; G03F0007-004 [I,C*]; G03F0007-32 [I,A];
 G03F0007-32 [I,C*]
 FTERM 2H025/AB03; 2H025/AC08; 2H025/AD03; 2H025/CB13;
 2H025/CB14; 2H025/CB29; 2H025/CC20; 2H025/FA17;
 2H096/AA07; 2H096/AA08; 2H096/BA11; 2H096/BA20;
 2H096/EA04; 2H096/GA08; 2H096/GA09

AB The plate containing an IR absorbing compound and an alkali soluble resin, is developed with a processing solution in which the solid alkaline developer is solubilized, after exposing it according to digitally converted image data. The alkaline developer for the method and printing plate manufactured by the

method, are also claimed. The method shows less printing stain after long run processing and improved dot shape.

ST photosensitive lithog plate solid alk developer; IR absorbent **novolak** resin lithog plate

IT Lithographic plates
 (development of photosensitive lithog. plate using solid alkaline developer)

IT Phenolic resins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**novolak**; development of photosensitive lithog. plate using solid alkaline developer)

IT 9039-25-2, LB 6564
 RL: TEM (Technical or engineered material use); USES (Uses)
 (LB 6564; development of photosensitive lithog. plate using solid alkaline developer)

IT 124996-93-6P, Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl methacrylate copolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (development of photosensitive lithog. plate using solid alkaline developer)

IT 107-21-1D, Ethylene glycol, reaction products with dimethoxycyclohexane 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses 1312-76-1, Potassium silicate 6834-92-0, Sodium metasilicate 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 85334-85-6D, Dimethoxycyclohexane, reaction products with ethylene glycol 115111-30-3, Acrylonitrile-p-hydroxyphenyl methacrylamide-methyl methacrylate copolymer
 RL: TEM (Technical or engineered material use); USES (Uses)
 (development of photosensitive lithog. plate using solid alkaline developer)

IT 3119-93-5, 3-Ethyl-2-methylbenzothiazolium iodide 108961-97-3 134127-48-3
 RL: TEM (Technical or engineered material use); USES (Uses)
 (dye; development of photosensitive lithog. plate using solid alkaline developer)

IT 93641-24-8
 RL: CAT (Catalyst use); USES (Uses)
 (**photoacid** generator; development of photosensitive lithog. plate using solid alkaline developer)

IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and polymerization of)

IT 63-74-1, p-Aminobenzenesulfonamide 79-41-4, Methacrylic acid, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of aminosulfonylphenyl methacrylamide)

L12 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:570084 CAPLUS

DN 140:225645

ED Entered STN: 25 Jul 2003

TI Nanocomposite resist for low-voltage electron beam lithography (LVEBL)

AU Ali, Mohammad Azam; Gonsalves, Kenneth E.; Agrawal, Ankur; Jeyakumar, Augustin; Henderson, Clifford L.
 CS Department of Chemistry & NanoTech. Research Lab., Cameron Applied Research Center, Univ. of North Carolina, Charlotte, NC, 28223, USA
 SO Proceedings of SPIE-The International Society for Optical Engineering (2003), 5039(Pt. 1, Advances in Resist Technology and Processing XX), 442-452
 CODEN: PSISDG; ISSN: 0277-786X
 PB SPIE-The International Society for Optical Engineering
 DT Journal
 LA English
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 AB A novel chemical amplified resist (CAR) was synthesized incorporating a **photoacid** generating (PAG) moiety, etch resistant nanoparticle, and various acrylated monomers. The addition of acrylated monomers was found to promote good film formation and to improve film adhesion. Directly tethering the nanoparticle into the polymer increases the etch performance of the resist and helps avoid any potential issues with phase separation of components in the resist film. The PAG in these materials is also directly incorporated into the resist backbone. It has been shown that these materials display enhanced sensitivity and contrast using LVEBL. This paper will discuss the material characteristics and lithog. performance of these materials using 2 keV, 10 KeV, and 20 KeV electron beam (EB) exposure. For example, these materials have demonstrated an extremely high sensitivity of only 0.6 $\mu\text{C}/\text{cm}^2$ at 2 KeV. Contrast and sensitivity data along with preliminary imaging results will be presented for these materials. Initial imaging results at 20 keV are promising. Achieving similar resolution at low keV also appears to be possible with this material. The trade-off between sensitivity and resolution will also be presented for different electron beam accelerating potentials. Etch resistance and selectivity of this material will also be studied and compared to PHOST and **novolak** based resists. It will be demonstrated that such materials show great promise for advanced resist applications in a variety of next generation lithog. (NGL) applications including electron beam lithog.
 ST nanocomposite chem amplified resist electron beam lithog
 IT Surface roughness
 (chemical amplified resist for low-voltage electron-beam lithog. based on copolymer incorporating **photoacid** generating groups and etch resistant nanoparticle and various acrylated monomers)
 IT Electron beam resists
 (chemical amplified; chemical amplified resist for low-voltage electron-beam lithog. based on copolymer incorporating **photoacid** generating groups and etch resistant nanoparticle and various acrylated monomers)
 IT Silsesquioxanes
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (methacrylate derivs., polymers; chemical amplified resist for low-voltage electron-beam lithog. based on copolymer incorporating **photoacid** generating groups and etch resistant nanoparticle and various acrylated monomers)
 IT **79-41-4D**, Methacrylic acid, oligosilsesquioxane derivative esters, polymers with methacrylic acid and methacrylate esters containing alkyl- or sulfonium groups **79-41-4D**, Methacrylic acid, polymers with methacrylate esters containing oligosilsesquioxane- or alkyl- or sulfonium groups **80-62-6D**, Methyl methacrylate, polymers with methacrylic acid and methacrylates containing oligosilsesquioxane- or alkyl- or sulfonium groups **585-07-9D**, tert-Butyl methacrylate, polymers with methacrylic acid and methacrylates containing oligosilsesquioxane- or alkyl- or sulfonium groups **352455-54-0D**, polymers with methacrylic acid and its esters containing oligosilsesquioxane- or alkyl groups
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (chemical amplified resist for low-voltage electron-beam lithog. based on

copolymer incorporating **photoacid** generating groups and etch resistant nanoparticle and various acrylated monomers)

IT 75-59-2, Tetramethylammonium hydroxide
 RL: NUU (Other use, unclassified); USES (Uses)
 (developer; chemical amplified resist for low-voltage electron-beam lithog. based on copolymer incorporating **photoacid** generating groups and etch resistant nanoparticle and various acrylated monomers)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

- RE
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 - (2) Allen, R; Polym Mater, Sci & Eng 1989, V61, P185 CAPLUS
 - (3) Anon; LEEPL Magazine- Next Generation Low-Cost Electron Beam Lithography Fabrication Technology, http://www.sony.net/Products/SC-HP/CXPAL/CXNEWS-29/PDF/Mask_f.Pdf 2002
 - (4) Gonsalves, K; Adv Mater 2001, V13, P703 CAPLUS
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 - (6) Gonsalves, K; Pending # 09-992560 2001
 - (7) Gonsalves, K; Pending # US09-992560 2002
 - (8) Hu, H; J Vac Sci Technol B 2001, V19, P851
 - (9) Hu, Y; Microelectronic Eng 2001, V56, P289 CAPLUS
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 - (13) Stewart, M; Encyclopedia of Materials: Science & Technology 2001, P6973
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 - (15) Wallarff, G; Chem Rev 1999, V99, P1801
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L12 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:822998 CAPLUS

DN 133:367847

ED Entered STN: 24 Nov 2000

TI Photosensitive resin composition containing modified epoxy resin

IN Ohtsuki, Nobuaki

PA Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-038

ICS C08G059-62; C08L063-10; G03F007-027; G03F007-032

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 2000321769 | A2 | 20001124 | JP 1999-126333 | 19990506 |
| PRAI | JP 1999-126333 | | 19990506 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|---|
| JP 2000321769 | ICM | G03F007-038 |
| | ICS | C08G059-62; C08L063-10; G03F007-027; G03F007-032 |
| | IPCI | G03F0007-038 [ICM,7]; C08G0059-62 [ICS,7]; C08L0063-10 [ICS,7]; G03F0007-027 [ICS,7]; G03F0007-032 [ICS,7] |
| | IPCR | C08G0059-00 [I,C*]; C08G0059-62 [I,A]; C08L0063-00 [I,C*]; C08L0063-10 [I,A]; G03F0007-027 [I,A]; G03F0007-027 [I,C*]; G03F0007-032 [I,A]; G03F0007-032 [I,C*]; G03F0007-038 [I,A]; G03F0007-038 [I,C*] |

AB The title resin composition, comprising a modified epoxy resin, a photoradical polymerization initiator, and a **photoacid** generator, employs, as the modified epoxy resin, a product obtained by the reaction of an epoxy resin having ≥ 2 epoxy groups in average in its mol with an alc. OH-containing phenolic compound and an unsatd. monobasic acid in a ratio of < 1 mol in the

total of the phenolic compound and acid to 1 chemical equiv of the epoxy group of the resin. A cured coating film showing good adhesion to substrate, chemical, thermal, and water resistance is obtained therefrom.

ST photoresist modified epoxy resin; acid generator photopolymn initiator photoresist

IT Phenolic resins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (epoxy, **novolak**; photoresist composition containing modified epoxy resin, photopolymn. initiator, and acid generator)

IT Epoxy resins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (phenolic, **novolak**; photoresist composition containing modified epoxy resin, photopolymn. initiator, and acid generator)

IT Photoresists
 (photoresist composition containing modified epoxy resin, photopolymn. initiator, and acid generator)

IT 82799-44-8, Kayacure DETX
 RL: TEM (Technical or engineered material use); USES (Uses)
 (acid generator; photoresist composition containing modified epoxy resin, photopolymn. initiator, and acid generator)

IT 79-10-7DP, Acrylic acid, reaction products with epoxy resin
 85-43-8DP, Tetrahydrophthalic anhydride, reaction products with epoxy resin 501-94-0DP, reaction products with epoxy resin 145269-05-2DP, ESCN 195XHH, reaction products with hydroxyphenyl ethanol and acrylic acid
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (photoresist composition containing modified epoxy resin, photopolymn. initiator, and acid generator)

IT 29570-58-9, Dipentaerythritol hexaacrylate
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photoresist composition containing modified epoxy resin, photopolymn. initiator, and acid generator)

L12 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1991:32954 CAPLUS

DN 114:32954

ED Entered STN: 26 Jan 1991

TI Application of silyl ether and silyl ester polymers for chemical amplification system

AU Aoai, Toshiaki; Aotani, Yoshimasa; Umehara, Akira; Kokubo, Tadayoshi

CS Fuji Photo Film Co., Ltd., Shizuoka, 421-03, Japan

SO Journal of Photopolymer Science and Technology (1990), 3(3), 389-400
 CODEN: JSTEEW; ISSN: 0914-9244

DT Journal

LA English

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

AB A chemical amplification system using silyl ether I (R = -CH₂C₆H₄CH₂-, -(CH₂CH₂O)₄-, -CH₂CH₂OCONH-C₆H₃(Me)-NHCOOCH₂CH₂- and silyl ester polymers II (R₁ = R₂ = Me, R₃ = Me, Pr, sec-Bu, tert-Bu or R₁ = R₂ = R₃ = Et, iso-Pr) as acid generator compds. was investigated. Disulfones, p-ClC₆H₄SO₂SO₂R₄ (R₄ = p-MeC₆H₄, α-naphthyl) as **photoacid** generators were also investigated. The chemical amplification composition consisting of **novolak** resin, disulfone and silicone polymer as dissoln. inhibitor gave a deep-UV, pos., high-speed photoresist.

ST chem amplification photoresist sulfone silicone **novolak**

IT Poly(arylenealkylenes)
 Polyamides, uses and miscellaneous
 Polyoxyalkylenes, uses and miscellaneous
 RL: USES (Uses)
 (di-Me siloxane-, chemical-amplification photoresist based on)

IT Siloxanes and Silicones, uses and miscellaneous
 RL: USES (Uses)
 (di-Me, polyamide-, chemical-amplification photoresist based on)

IT Siloxanes and Silicones, uses and miscellaneous

RL: USES (Uses)
 (di-Me, polyarylenealkylene-, chemical-amplification photoresist based on)
 IT Siloxanes and Silicones, uses and miscellaneous
 RL: USES (Uses)
 (di-Me, polyoxyalkylene-, chemical-amplification photoresist based on)
 IT Resists
 (photo-, chemical-amplification, silyl ether and silyl ester polymers for)
 IT 91222-47-8 131391-66-7 131391-83-8
 RL: USES (Uses)
 (chemical amplification photoresist composition containing acid
 photogenerator of)
 IT 79-41-4D, Methacrylic acid, silyl esters, polymers
 RL: USES (Uses)
 (chemical-amplification photoresist based on)

=> D HIS

(FILE 'HOME' ENTERED AT 19:14:15 ON 23 JUN 2006)

FILE 'REGISTRY' ENTERED AT 19:14:32 ON 23 JUN 2006

L1 1 S METHACRYLIC ACID/CN
 L2 46112 S 79-41-4/CRN
 L3 0 S ACRYLIC ACID/CRN
 L4 1 S ACRYLIC ACID/CN
 L5 0 S 79/10/7/CRN
 L6 59563 S 79-10-7/CRN

FILE 'CAPLUS' ENTERED AT 19:15:44 ON 23 JUN 2006

L7 26806 S (NOVOLAK OR NOVALAK OR NOVOLAC OR NOVOLAK) OR ((PHENOL CRESOL
 L8 53490 S L1 OR L4
 L9 592 S L8 AND L7
 L10 .2 S L9 AND ACETAL
 L11 0 S L9 AND POLYACETAL
 L12 6 S L9 AND PHOTOACID

=> S L11 AND PHOTO?

1410687 PHOTO?

L13 0 L11 AND PHOTO?

=> S L9 AND PHOTO?

1410687 PHOTO?

L14 319 L9 AND PHOTO?

=> S L14 AND POSITIV?

101303 POSITIV?

L15 16 L14 AND POSITIV?

=> D ALL 1-16

L15 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2006:318362 CAPLUS
 DN 144:379236
 ED Entered STN: 06 Apr 2006
 TI **Positive**-working chemically amplified **photoresist**
 composition for manufacturing liquid crystal devices
 IN Murayama, Toshikazu; Ito, Katsuhiko; Komai, Masatsugu; Kato, Yoshiyuki;
 Numazaki, Ryo
 PA Kyowa Hakko Chemical Co., Ltd., Japan
 SO PCT Int. Appl., 45 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

Section cross-reference(s): 35

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | WO 2006035926 | A1 | 20060406 | WO 2005-JP18091 | 20050930 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| PRAI | JP 2004-285750 | A | 20040930 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|------------|-------|------------------------------------|
|------------|-------|------------------------------------|

| | | |
|---------------|------|---------------------------------------|
| WO 2006035926 | IPCI | G03F0007-039 [I,A]; G02F0001-13 [I,A] |
|---------------|------|---------------------------------------|

AB The invention relates to a chemical amplified pos. resist composition for liquid

crystal devices, characterized by comprising (A) a polymer having groups represented by the general formula (R1)(R2)CH-CH(-X-CH3)(-O-R3) wherein R1, R2 and R3 are each independently substituted or unsubstituted alkyl; substituted or unsubstituted aryl, or the like; and X is O or NR (wherein R is hydrogen, substituted or unsubstituted alkyl, substituted or unsubstituted aryl, or substituted or unsubstituted aralkyl), (B) a compound capable of generating an acid on being irradiated with a radiation, and (C) an organic solvent.

ST pos amplified **photoresist** compn liq crystal polymer

IT Liquid crystal displays

Positive photoresists

(pos. **photoresist** composition for manufacturing liquid crystal devices)

IT 27029-76-1DP, m-Cresol-p-cresol-formaldehyde copolymer, reaction product with 1-chloro-2-methylpropane derivative

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(EP 4000 B; pos. **photoresist** composition for manufacturing liquid crystal devices)

IT 79-41-4, Methacrylic acid, reactions 17574-84-4, 1-Methoxy-2-methylpropene

RL: RCT (Reactant); RACT (Reactant or reagent)

(pos. **photoresist** composition for manufacturing liquid crystal devices)

IT 487048-12-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(pos. **photoresist** composition for manufacturing liquid crystal devices)

IT 5760-38-3DP, reaction product with **novolak** resin 22398-94-3DP, reaction product with poly(hydroxystyrene) 59269-51-1DP,

Poly(hydroxystyrene), reaction product with propene derivative 882052-19-9P 882052-20-2DP, reaction product with **novolak** resin

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pos. **photoresist** composition for manufacturing liquid crystal devices)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Clariant International Ltd; WO 03107093 A2 2003 CAPLUS

(2) Clariant International Ltd; EP 1516229 A1 2003 CAPLUS

(3) Clariant International Ltd; US 20030235775 A1 2003

(4) Fuji Photo Film Co Ltd; JP 2003330172 A 2003 CAPLUS

(5) Kyowa Yuka Co Ltd; WO 03006407 A1 2003 CAPLUS

(6) Kyowa Yuka Co Ltd; EP 1415968 A1 2003 CAPLUS

- (7) Kyowa Yuka Co Ltd; US 20040181097 A1 2003
- (8) Kyowa Yuka Co Ltd; EP 1548498 A1 2004 CAPLUS
- (9) Kyowa Yuka Co Ltd; WO 2004019131 A1 2004 CAPLUS
- (10) Kyowa Yuka Co Ltd; JP 200475864 A 2004
- (11) Shin-Etsu Chemical Co Ltd; EP 1378795 A1 2004 CAPLUS
- (12) Shin-Etsu Chemical Co Ltd; US 20040023153 A1 2004
- (13) Shin-Etsu Chemical Co Ltd; JP 200445448 A 2004
- (14) Shin-Etsu Chemical Co Ltd; US 20050079446 A1 2005 CAPLUS
- (15) Shin-Etsu Chemical Co Ltd; JP 2005133065 A 2005 CAPLUS
- (16) Tokyo Ohka Kogyo Co Ltd; US 2002106580 A1 2002 CAPLUS
- (17) Tokyo Ohka Kogyo Co Ltd; JP 2002156764 A 2002 CAPLUS

L15 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1003682 CAPLUS

DN 143:295603

ED Entered STN: 16 Sep 2005

TI Resin compositions with good pattern resolution and pattern adhesion for **positive** type spacers

IN Hashiguchi, Hiroyuki; Okajima, Keiichi; Fujiwara, Satoru; Ohata, Masashi; Matsumura, Akira

PA Nippon Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02F001-1339

ICS C08G085-00; G09F009-00; G09F009-30

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 2005250203 | A2 | 20050915 | JP 2004-61770 | 20040305 |
| PRAI | JP 2004-61770 | | 20040305 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|---|
| JP 2005250203 | ICM | G02F001-1339 |
| | ICS | C08G085-00; G09F009-00; G09F009-30 |
| | IPCI | G02F0001-1339 [ICM,7]; G02F0001-13 [ICM,7,C*]; C08G0085-00 [ICS,7]; G09F0009-00 [ICS,7]; G09F0009-30 [ICS,7] |
| | IPCR | C08G0085-00 [I,A]; C08G0085-00 [I,C*]; G02F0001-13 [I,C*]; G02F0001-1339 [I,A]; G09F0009-00 [I,A]; G09F0009-00 [I,C*]; G09F0009-30 [I,A]; G09F0009-30 [I,C*] |
| | FTERM | 2H089/LA09; 2H089/MA04X; 2H089/NA05; 2H089/NA14; 2H089/QA12; 2H089/QA14; 2H089/SA17; 4J031/BD21; 4J031/BD23; 4J031/BD28; 4J031/CA06; 4J031/CA85; 4J031/CC05; 5C094/AA02; 5C094/AA06; 5C094/AA43; 5C094/BA43; 5C094/EC03; 5G435/AA01; 5G435/AA14; 5G435/AA17; 5G435/BB12; 5G435/KK00 |

AB Title compns. comprise (A) alkali-soluble resins, (B) diazonaphthoquinone compds., and (C) heat crosslinkers. Thus, Me methacrylate 247, styrene 8, isobornyl methacrylate 20, methacrylic acid 49, and glycidyl methacrylate-salicylic acid adduct 87 parts were polymerized to give a copolymer with glass transition temperature 110° and acid value 81, 50 parts of which was mixed with a diazonaphthoquinone type compound 30, B Vestanat 1358 20, and Megafac R 8 (surfactant) 0.2 parts, applied on a glass substrate, dried at 80° for 20 min, irradiated through a **photomask**, developed using a tetramethylammonium hydroxide solution, washed, and dried to give a pattern, showing good resolution and pattern adhesion.

ST resin compn pattern resoln adhesion pos spacer; Vestanat crosslinked

acrylic polymer diazonaphthoquinone type compd compn

IT Phenolic resins, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (epoxy, cresol-; resin compns. with good pattern resolution and pattern adhesion for pos. type spacers)

IT Phenolic resins, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (**novolak**, cresol-based, polymers with epoxy resins; resin compns. with good pattern resolution and pattern adhesion for pos. type spacers)

IT Liquid crystal displays
 (panels; resin compns. with good pattern resolution and pattern adhesion for pos. type spacers)

IT Epoxy resins, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (phenolic, cresol-; resin compns. with good pattern resolution and pattern adhesion for pos. type spacers)

IT **Positive photoresists**
 (resin compns. with good pattern resolution and pattern adhesion for pos. type spacers)

IT Aminoplasts
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (resin compns. with good pattern resolution and pattern adhesion for pos. type spacers)

IT Acrylic polymers, uses
 Phenolic resins, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (resin compns. with good pattern resolution and pattern adhesion for pos. type spacers)

IT 9003-08-1DP, Cymel 701, polymers with acrylic polymers
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (Cymel C 300; resin compns. with good pattern resolution and pattern adhesion for pos. type spacers)

IT 69-72-7DP, o-Hydroxybenzoic acid, reaction products with epoxy compds., acid, and diazonaphthoquinone disulfonyl chloride 79-09-4DP, Propionic acid, reaction products with epoxy compds., acid, and diazonaphthoquinone disulfonyl chloride 3454-29-3DP, Trimethylolpropane triglycidyl ether, reaction products with acids and diazonaphthoquinone disulfonyl chloride 20584-13-8DP, 1,2-Diazonaphthoquinone-5-sulfonyl chloride, reaction products with epoxy compds. and acids
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses) (**photosensitizer**; resin compns. with good pattern resolution and pattern adhesion for pos. type spacers)

IT 69-72-7DP, Salicylic acid, adducts with glycidyl methacrylate, polymers with acrylic monomers and crosslinkers **79-41-4DP**, Methacrylic acid, polymers with acrylic monomers and crosslinkers 80-62-6DP, Methyl methacrylate, polymers with acrylic monomers and crosslinkers 100-42-5DP, Styrene, polymers with acrylic monomers and crosslinkers 106-91-2DP, Glycidyl methacrylate, adducts with salicylic acid, polymers with acrylic monomers and crosslinkers 461-58-5DP, Dicyandiamide, polymers with epoxy resins and phenolic resins 7534-94-3DP, Isobornyl methacrylate, polymers with acrylic monomers and crosslinkers 101706-82-5DP, Epo Tohto YDCN 703, polymers with phenolic resins 131360-80-0DP, Vestanat B 1358, polymers with acrylic polymers
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (resin compns. with good pattern resolution and pattern adhesion for pos. type spacers)

L15 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:739289 CAPLUS
 DN 141:251468
 ED Entered STN: 10 Sep 2004
 TI Evaluation of images of IR laser-sensitive **positively** working
 presensitized lithographic plate and its quality control
 IN Aono, Koichiro; Kobayashi, Fumikazu
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 27 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G03F007-26
 ICS G03F007-00; G03F007-004; G03F007-032; G03F007-30
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 2004252222 | A2 | 20040909 | JP 2003-43297 | 20030220 |
| PRAI | JP 2003-43297 | | 20030220 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| JP 2004252222 | ICM | G03F007-26 |
| | ICS | G03F007-00; G03F007-004; G03F007-032; G03F007-30 |
| | IPCI | G03F0007-26 [ICM,7]; G03F0007-00 [ICS,7]; G03F0007-004 [ICS,7]; G03F0007-032 [ICS,7]; G03F0007-30 [ICS,7] |
| | IPCR | G03F0007-00 [I,A]; G03F0007-00 [I,C*]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-032 [I,A]; G03F0007-032 [I,C*]; G03F0007-26 [I,A]; G03F0007-26 [I,C*]; G03F0007-30 [I,A]; G03F0007-30 [I,C*] |
| | FTERM | 2H025/AB03; 2H025/AC08; 2H025/AD03; 2H025/CB13; 2H025/CB14; 2H025/CB17; 2H025/CB29; 2H025/CB52; 2H025/CC20; 2H025/FA03; 2H025/FA14; 2H025/FA17; 2H096/AA08; 2H096/BA16; 2H096/BA20; 2H096/EA04; 2H096/GA08; 2H096/GB10; 2H096/LA16 |

AB The evaluation process involves (A) a step of preparation of a standard developer liquid-treated lithog. plate by light exposure in conditions of screen line number 80-300 lines/in. (80-300 lines/2.54 cm) and formation of halftones with area ratio 30-70% and subsequent development with a standard developer liquid for a lithog. plate bearing a **photosensitive** layer formed on a support and containing an aqueous alkali-soluble resin and a light heat converting compound, (B) preparation of an objective developer liquid-treated lithog. plate by conditions same as those in the step A, except that the development is run by using a developer to be evaluated, and (C) a step of comparing halftone area ratios in the standard developer-treated lithog. plate and the objective developer-treated lithog. plate. The quality control process involves the above-mentioned steps A, B, and C, followed by (D) a step of modulation of exposure and/or development conditions when the difference between the halftone area ratios are above the predetd. value. Preferably, after the step D, a lithog. plate is prepared under the modulated conditions for exposure and/or development, is regarded as an objective developer liquid-treated lithog. plate in the step B, and is subjected to steps of C and D for ≥ 1 times.

ST IR laser pos presensitized lithog plate evaluation; exposure condition IR laser pos presensitized lithog plate; development condition IR laser pos presensitized lithog plate

IT Polyoxyalkylenes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT Phenolic resins, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (novolak, cresol-based, **photosensitive** layer component; evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT Fluoropolymers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**photosensitive** layer component; evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT Lithographic plates
 (presensitized, pos.-working; evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT 50-70-4, Sorbit, uses 77-92-9, Citric acid, uses 1310-73-2, Sodium hydroxide, uses 1312-76-1, Potassium silicate 25322-68-3, Polyethylene glycol 753021-88-4
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aqueous alkali developer component; evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT 63-74-1, p-Aminobenzenesulfonamide **79-41-4**, Methacrylic acid, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT 753021-86-2
 RL: TEM (Technical or engineered material use); USES (Uses)
 (evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT 56347-72-9 117283-53-1, Victoria Pure Blue BOH 1-naphthalenesulfonate 134127-48-3 154924-50-2
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (light heat converter, **photosensitive** layer component; evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT 124996-93-6P, Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl methacrylate copolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (**photosensitive** layer component; evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**photosensitive** layer component; evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT 37321-70-3, JIS 1050
 RL: TEM (Technical or engineered material use); USES (Uses)
 (support; evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

IT 216861-97-1
 RL: TEM (Technical or engineered material use); USES (Uses)
 (undercoat component; evaluation of images of IR laser-sensitive pos. working presensitized lithog. plate and its quality control)

ED Entered STN: 16 Jul 2004
 TI **Positive** type **photosensitive** image-forming materials
 and compositions workable with an infrared laser
 IN Miyake, Hideo; Kawauchi, Ikuo
 PA Fuji Photo Film Co., Ltd., Japan
 SO Eur. Pat. Appl., 49 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM B41M005-36
 ICS B41C001-10; G03F007-004
 CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 4

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|----------|
| PI | EP 1437232 | A2 | 20040714 | EP 2004-8648 | 19981016 |
| | EP 1437232 | A3 | 20040728 | | |
| | R: DE, GB | | | | |
| | JP 11119418 | A2 | 19990430 | JP 1997-285754 | 19971017 |
| | JP 3771694 | B2 | 20060426 | | |
| | EP 909657 | A2 | 19990421 | EP 1998-119634 | 19981016 |
| | EP 909657 | A3 | 19990519 | | |
| | EP 909657 | B1 | 20030618 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | EP 1258369 | A2 | 20021120 | EP 2002-15513 | 19981016 |
| | EP 1258369 | A3 | 20021204 | | |
| | EP 1258369 | B1 | 20050330 | | |
| | R: DE, GB | | | | |
| | JP 11218914 | A2 | 19990810 | JP 1998-322334 | 19981112 |
| | JP 2002196491 | A2 | 20020712 | JP 2001-376180 | 19981112 |
| | JP 2002251003 | A2 | 20020906 | JP 2001-398410 | 19981112 |
| | US 6340551 | B1 | 20020122 | US 1999-421535 | 19991020 |
| | US 2002081522 | A1 | 20020627 | US 2001-993634 | 20011127 |
| | JP 2004145370 | A2 | 20040520 | JP 2004-45309 | 20040220 |
| | JP 2004145371 | A2 | 20040520 | JP 2004-45310 | 20040220 |
| | JP 2004171029 | A2 | 20040617 | JP 2004-45308 | 20040220 |
| | JP 2004157573 | A2 | 20040603 | JP 2004-57884 | 20040302 |
| | JP 2004192011 | A2 | 20040708 | JP 2004-57885 | 20040302 |
| | JP 2004192012 | A2 | 20040708 | JP 2004-57886 | 20040302 |
| PRAI | JP 1997-285754 | A | 19971017 | | |
| | JP 1997-313778 | A | 19971114 | | |
| | EP 1998-119634 | A3 | 19981016 | | |
| | EP 2002-15513 | A3 | 19981016 | | |
| | US 1998-173719 | A3 | 19981016 | | |
| | JP 1998-322334 | A3 | 19981112 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|---|
| EP 1437232 | ICM | B41M005-36 |
| | ICS | B41C001-10; G03F007-004 |
| | IPCI | B41M0005-36 [ICM,7]; B41C0001-10 [ICS,7]; G03F0007-004 [ICS,7] |
| JP 11119418 | ECLA | B41C001/10A; B41M005/36S |
| | IPCI | G03F0007-004 [I,A]; G03F0007-039 [I,A]; B41N0001-14 [I,A]; B41N0001-12 [I,C*] |
| | IPCR | B41N0001-12 [I,C*]; B41N0001-14 [I,A]; G03F0007-00 [I,A]; G03F0007-00 [I,C*]; G03F0007-004 [I,A]; G03F0007-004 [I,C*] |
| EP 909657 | IPCI | B41M0005-36 [ICM,6]; B41C0001-10 [ICS,6]; G03F0007-004 [ICS,6] |
| | IPCR | B41C0001-10 [I,A]; B41C0001-10 [I,C*]; B41M0005-36 [I,A]; B41M0005-36 [I,C*]; G03F0007-004 [I,A]; G03F0007-004 [I,C*] |

| | | |
|---------------|-------|--|
| EP 1258369 | ECLA | B41C001/10A; B41M005/36S; G03F007/004D |
| | IPCI | B41M0005-36 [ICM, 6]; B41C0001-10 [ICS, 6]; G03F0007-004 [ICS, 6] |
| JP 11218914 | ECLA | B41C001/10A |
| | IPCI | G03F0007-032 [ICM, 6]; B41N0001-14 [ICS, 6]; B41N0001-12 [ICS, 6, C*]; G03F0007-00 [ICS, 6]; G03F0007-004 [ICS, 6] |
| | IPCR | B41N0001-12 [I, C*]; B41N0001-14 [I, A]; G03F0007-00 [I, A]; G03F0007-00 [I, C*]; G03F0007-004 [I, A]; G03F0007-004 [I, C*]; G03F0007-032 [I, A]; G03F0007-032 [I, C*] |
| JP 2002196491 | IPCI | G03F0007-033 [ICM, 7]; B41N0001-14 [ICS, 7]; B41N0001-12 [ICS, 7, C*]; G03F0007-004 [ICS, 7]; G03F0007-095 [ICS, 7]; G03F0007-11 [ICS, 7]; G03F0007-00 [ICS, 7]; G03F0007-039 [ICS, 7] |
| JP 2002251003 | IPCI | G03F0007-00 [ICM, 7]; G03F0007-004 [ICS, 7]; G03F0007-032 [ICS, 7]; G03F0007-11 [ICS, 7] |
| US 6340551 | IPCI | G03C0001-52 [ICM, 7] |
| | IPCR | B41C0001-10 [I, A]; B41C0001-10 [I, C*]; B41M0005-36 [I, A]; B41M0005-36 [I, C*]; G03F0007-004 [I, A]; G03F0007-004 [I, C*] |
| | NCL | 430/192.000; 430/156.000; 430/270.100; 430/281.100; 430/905.000; 430/944.000 |
| | ECLA | B41C001/10A; B41M005/36S; G03F007/004D |
| US 2002081522 | IPCI | G03F0007-038 [ICM, 7] |
| | IPCR | B41C0001-10 [I, A]; B41C0001-10 [I, C*]; B41M0005-36 [I, A]; B41M0005-36 [I, C*]; G03F0007-004 [I, A]; G03F0007-004 [I, C*] |
| | NCL | 430/270.100 |
| JP 2004145370 | ECLA | B41C001/10A; B41M005/36S; G03F007/004D |
| | IPCI | G03F0007-38 [ICM, 7]; G03F0007-095 [ICS, 7]; G03F0007-00 [ICS, 7] |
| | IPCR | G03F0007-00 [N, A]; G03F0007-00 [N, C*]; G03F0007-095 [I, A]; G03F0007-095 [I, C*]; G03F0007-38 [I, A]; G03F0007-38 [I, C*] |
| | FTERM | 2H025/AA01; 2H025/AA12; 2H025/AB03; 2H025/AC08; 2H025/AD01; 2H025/AD03; 2H025/CB29; 2H025/CB41; 2H025/CB52; 2H025/CC20; 2H025/EA04; 2H025/EA10; 2H025/FA03; 2H025/FA17; 2H096/AA07; 2H096/BA16; 2H096/BA20; 2H096/CA12; 2H096/CA20; 2H096/EA04; 2H096/GA08; 2H096/JA02; 2H096/KA02 |
| JP 2004145371 | IPCI | G03F0007-004 [ICM, 7]; G03F0007-00 [ICS, 7]; G03F0007-095 [ICS, 7] |
| | IPCR | G03F0007-00 [I, A]; G03F0007-00 [I, C*]; G03F0007-004 [I, A]; G03F0007-004 [I, C*]; G03F0007-095 [I, A]; G03F0007-095 [I, C*] |
| | FTERM | 2H025/AA12; 2H025/AB03; 2H025/AC08; 2H025/AD01; 2H025/AD03; 2H025/CB41; 2H025/CB52; 2H025/CC20; 2H025/DA13; 2H025/FA03; 2H025/FA17; 2H096/AA08; 2H096/BA16; 2H096/BA20; 2H096/CA20; 2H096/EA04; 2H096/GA08; 2H096/JA04 |
| | | |
| JP 2004171029 | IPCI | G03F0007-033 [ICM, 7]; B32B0027-42 [ICS, 7]; G03F0007-00 [ICS, 7]; G03F0007-032 [ICS, 7]; G03F0007-11 [ICS, 7] |
| | IPCR | B32B0027-42 [I, A]; B32B0027-42 [I, C*]; G03F0007-00 [I, A]; G03F0007-00 [I, C*]; G03F0007-032 [I, A]; G03F0007-032 [I, C*]; G03F0007-033 [I, A]; G03F0007-033 [I, C*]; G03F0007-11 [I, A]; G03F0007-11 [I, C*] |
| | FTERM | 2H025/AA01; 2H025/AA04; 2H025/AA06; 2H025/AA12; 2H025/AB03; 2H025/AC08; 2H025/AD03; 2H025/BG00; 2H025/CB14; 2H025/CB29; 2H025/CB41; 2H025/CB45; 2H025/CC11; 2H025/FA17; 2H096/AA06; 2H096/BA09; 2H096/CA05; 2H096/EA04; 2H096/GA08; 4F100/AK02B; 4F100/AK03B; 4F100/AK12B; 4F100/AK21B; 4F100/AK24B; 4F100/AK25B; 4F100/AK26B; 4F100/AK27B; 4F100/AK34C; 4F100/AK62B; 4F100/AK66B; 4F100/AL01B; 4F100/AT00A; 4F100/BA03; 4F100/BA07; 4F100/BA10A; 4F100/BA10C; |
| | | |

JP 2004157573 IPCI 4F100/EH46; 4F100/GB41; 4F100/JK01; 4F100/YY00B
G03F0007-11 [ICM,7]; G03F0007-004 [ICS,7]; G03F0007-00
[ICS,7]
IPCR G03F0007-00 [N,A]; G03F0007-00 [N,C*]; G03F0007-004
[I,A]; G03F0007-004 [I,C*]; G03F0007-11 [I,A];
G03F0007-11 [I,C*]
FTERM 2H025/AA01; 2H025/AA12; 2H025/AB03; 2H025/AC08;
2H025/AD03; 2H025/CB29; 2H025/CB52; 2H025/CC20;
2H025/DA36; 2H025/FA03; 2H025/FA17; 2H096/AA08;
2H096/BA16; 2H096/BA20; 2H096/CA05; 2H096/EA04;
2H096/GA08

JP 2004192011 IPCI G03F0007-00 [ICM,7]; G03F0007-004 [ICS,7]; G03F0007-095
[ICS,7]
IPCR G03F0007-00 [I,A]; G03F0007-00 [I,C*]; G03F0007-004
[I,A]; G03F0007-004 [I,C*]; G03F0007-095 [I,A];
G03F0007-095 [I,C*]
FTERM 2H025/AB03; 2H025/AC08; 2H025/AD01; 2H025/AD03;
2H025/CB28; 2H025/CB45; 2H025/CB52; 2H025/CC03;
2H025/CC20; 2H025/DA36; 2H025/EA04; 2H025/FA03;
2H025/FA17; 2H096/AA07; 2H096/AA08; 2H096/BA16;
2H096/BA20; 2H096/CA05; 2H096/CA12; 2H096/EA04;
2H096/GA08

JP 2004192012 IPCI G03F0007-004 [ICM,7]; G03F0007-032 [ICS,7]
IPCR G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-032
[I,A]; G03F0007-032 [I,C*]
FTERM 2H025/AA04; 2H025/AA12; 2H025/AB03; 2H025/AC08;
2H025/AD03; 2H025/CB14; 2H025/CB29; 2H025/CB45;
2H025/CC04; 2H025/CC11; 2H025/DA13; 2H025/FA10;
2H025/FA17

AB The materials comprise: a substrate; a layer (A) containing $\geq 50\%$ a copolymer derived from ≥ 10 mol% monomers selected from: (a-1) compds. having a sulfonamide group wherein at least 1 H atom is linked to a N atom, (a-2) compds. having an active imino group of $-C(O)NHSO_2-$ and (a-3) compds. selected from acrylamide, methacrylamide, acrylate, methacrylate and hydroxystyrene, which resp. have a phenolic hydroxyl group; and a layer (B) containing $\geq 50\%$ an aqueous alkali solution-soluble resin

having a phenolic hydroxyl group. The layer (A) and the layer (B) are laminated on the substrate in that order. At least the layer (B) contains a compound which generates heat upon absorbing light. An image forming material comprises following compound $R_1SO_2SO_2R_2$ or $R_1-SO_2-R_2$ wherein R_1 and R_2 may be the same or different, and R_1 and R_2 represent a substituted or non-substituted alkyl, alkenyl or aryl group. The materials and compns. have excellent stability of sensitivity with regard to concentration of a developing solution, i.e., have excellent development latitude and are useful for offset printing plate production. Thus, polymerizing N-(p-aminosulfonylphenyl)methacrylamide with Et methacrylate gave a copolymer which at 0.75 g was combined with a cyanine dye 0.04, p-toluenesulfonic acid 0.002, tetrahydrophthalic anhydride 0.05, a dye 0.015, Megafac F 177 (F-containing surfactant) 0.02, γ -butyrolactone 8, MEK 8 and 1-methoxy-2-propanol 7 g to give a solution (A). Coating the A on a cleaned, anodized and β -alanine-treated surface of an Al plate, drying, coating a solution containing m,p-cresol **novolak** 0.25, cyanine dye 0.05, n-dodecyl stearate 0.02, Megafac F 177 0.05, MEK 7 and 1-methoxy-2-propanol 7 g on top and drying gave a plate precursor patternable by IR laser radiation.

ST IR laser pos working **photoresist** sulfonamide resin; alk sol resin IR laser pos working **photoresist**; plating making pos working **photoresist** alkali sol resin

IT IR lasers

Positive photoresists

Printing plates

(pos.-working **photoresist** materials and compns. workable with an IR laser and their use in plate making)

IT 7429-90-5, Aluminum, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (plate substrate; pos.-working **photoresist** materials and
 compns. workable with an IR laser and their use in plate making)

IT 203179-80-0P, Ethyl methacrylate-N-(p-hydroxyphenyl)methacrylamide
 copolymer 223561-59-9P, N-(p-Aminosulfonylphenyl)methacrylamide-ethyl
 methacrylate copolymer 223561-61-3P, Acrylonitrile-N-(p-
 aminosulfonylphenyl)acrylamide-methyl methacrylate copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (pos.-working **photoresist** materials and compns. workable with
 an IR laser and their use in plate making)

IT 9016-83-5, Cresol-formaldehyde copolymer 28391-39-1, p-Vinylbenzoic acid
 polymer 51241-17-9, Triethyl(vinylbenzyl)ammonium chloride chloride
 polymer 504413-05-2, Acrylonitrile-methyl methacrylate-N-(p-
 toluenesulfonyl)methacrylamide copolymer
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
 engineered material use); USES (Uses)
 (pos.-working **photoresist** materials and compns. workable with
 an IR laser and their use in plate making)

IT 63-74-1, p-Aminobenzenesulfonamide **79-10-7**, Acrylic acid,
 reactions **79-41-4**, Methacrylic acid, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (pos.-working **photoresist** materials and compns. workable with
 an IR laser and their use in plate making)

L15 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:818011 CAPLUS

DN 139:330322

ED Entered STN: 17 Oct 2003

TI Isocyanate crosslinked imageable compositions

IN Mulligan, James

PA Kodak Polychrome Graphics, L.L.C., USA

SO U.S. Pat. Appl. Publ., 18 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM G03F007-023

ICS G03F007-021; G03F007-30

INCL 430190000; X43-019.1; X43-019.2; X43-019.3; X43-016.5; X43-017.6;
 X43-032.6; X43-033.0; X43-027.01

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | US 2003194635 | A1 | 20031016 | US 2002-56212 | 20020124 |
| | US 6783911 | B2 | 20040831 | | |
| PRAI | US 2002-56212 | | 20020124 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|---|
| US 2003194635 | ICM | G03F007-023 |
| | ICS | G03F007-021; G03F007-30 |
| | INCL | 430190000; X43-019.1; X43-019.2; X43-019.3; X43-016.5; X43-017.6; X43-032.6; X43-033.0; X43-027.01 |
| | IPCI | G03F0007-023 [ICM,7]; G03F0007-021 [ICS,7]; G03F0007-016 [ICS,7,C*]; G03F0007-30 [ICS,7] |
| | IPCR | G03F0007-022 [I,A]; G03F0007-022 [I,C*]; G03F0007-023 [I,A]; G03F0007-023 [I,C*]; G03F0007-11 [N,A]; G03F0007-11 [N,C*] |
| | NCL | 430/190.000 |
| | ECLA | G03F007/022M; G03F007/023P |

OS MARPAT 139:330322

AB The present invention provides a pos.-working imageable composition, which

includes a hydroxy functional resin comprising a covalently bound radiation sensitive group capable of increasing the solubility of the imageable composition in an alkaline developer upon exposure to radiation; and an isocyanate crosslinking agent. The present invention further provides an imageable element, which includes a substrate and an imageable composition according to the present invention coated on a surface of the substrate and a method of producing an imaged element according to the present invention. Also provided is a radiation sensitive hydroxy functional resin including a covalently bound radiation sensitive group capable of increasing solubility in an alkaline developer of an imageable composition derived therefrom upon exposure of the imageable composition to radiation.

ST isocyanate crosslinked **photoresist** compn imaging element

IT Acrylic polymers, uses
Polyesters, uses
Polyurethanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(hydroxy-containing; isocyanate crosslinked imageable composition for imaging element)

IT Crosslinking agents
Positive photoresists
(isocyanate crosslinked imageable composition for imaging element)

IT Phenolic resins, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(**novolak**, reaction products, naphthoquinone diazide sulfonic acid esters; isocyanate crosslinked imageable composition for imaging element)

IT Phenolic resins, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(resol; isocyanate crosslinked imageable composition for imaging element)

IT 68584-99-6, Posilux 2521
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(Posilux 2521; isocyanate crosslinked imageable composition for imaging element)

IT 548-62-9, Basic Violet 3
RL: TEM (Technical or engineered material use); USES (Uses)
(crystal violet; isocyanate crosslinked imageable composition for imaging element)

IT 101-68-8, MDI 822-06-0, Hexamethylene diisocyanate 4098-71-9, Isophorone diisocyanate 26471-62-5, TDI 58067-42-8 613220-59-0, Trixene BI 7950 613220-60-3, Trixene BI 7960
RL: MOA (Modifier or additive use); USES (Uses)
(isocyanate crosslinked imageable composition for imaging element)

IT **79-10-7D**, Acrylic acid, esters, copolymers with vinylphenol 25086-36-6, N 13 31257-96-2D, Vinylphenol, copolymers with acrylate monomers 59269-51-1, Vinylphenol homopolymer 80296-78-2 223508-90-5, IH 1225 321966-55-6 613220-96-5, PD 646A
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(isocyanate crosslinked imageable composition for imaging element)

IT 3251-84-1, Victoria Blue FBR 3584-23-4 9070-36-4 41432-19-3 68900-98-1 69432-40-2 79723-43-6 114535-84-1 117482-71-0 121239-75-6, 4-Octyloxyphenylphenyliodonium hexafluoroantimonate 143084-48-4, N-Ethoxyisoquinolinium hexafluorophosphate 612843-84-2
RL: TEM (Technical or engineered material use); USES (Uses)
(isocyanate crosslinked imageable composition for imaging element)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; JP 55-045017 1980 CAPLUS

(2) Anon; JP 62-164049 1987 CAPLUS
 (3) Anon; WO 9512837 1995 CAPLUS
 (4) Anon; JP 20-00089451 2000 CAPLUS
 (5) Anon; JP 20-00275834 2000 CAPLUS
 (6) Hsieh; US 4189320 A 1980 CAPLUS
 (7) Kurisaki; US 6372403 B1 2002 CAPLUS
 (8) Nishino; US 6596150 B2 2003 CAPLUS
 (9) Schupp; US 4579806 A 1986 CAPLUS

L15 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:955445 CAPLUS
 DN 138:39737
 ED Entered STN: 18 Dec 2002
 TI Novel polyphenol compounds and their derivatives and resin compositions containing them
 IN Otsuki, Nobuaki; Sugioka, Takao
 PA Nippon Shokubai Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 18 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08G061-02
 ICS C08F299-02; C08G059-62; G03F007-022; G03F007-023; G03F007-027; G03F007-028; H05K003-00
 CC 35-7 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 42, 74

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 2002363262 | A2 | 20021218 | JP 2001-167724 | 20010604 |
| PRAI | JP 2001-167724 | | 20010604 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| JP 2002363262 | ICM | C08G061-02 |
| | ICS | C08F299-02; C08G059-62; G03F007-022; G03F007-023; G03F007-027; G03F007-028; H05K003-00 |
| | IPCI | C08G0061-02 [ICM,7]; C08G0061-00 [ICM,7,C*]; C08F0299-02 [ICS,7]; C08F0299-00 [ICS,7,C*]; C08G0059-62 [ICS,7]; C08G0059-00 [ICS,7,C*]; G03F0007-022 [ICS,7]; G03F0007-023 [ICS,7]; G03F0007-027 [ICS,7]; G03F0007-028 [ICS,7]; H05K0003-00 [ICS,7] |
| | IPCR | C08F0299-00 [I,C*]; C08F0299-02 [I,A]; C08G0059-00 [I,C*]; C08G0059-62 [I,A]; C08G0061-00 [I,C*]; C08G0061-02 [I,A]; G03F0007-022 [I,A]; G03F0007-022 [I,C*]; G03F0007-023 [I,A]; G03F0007-023 [I,C*]; G03F0007-027 [I,A]; G03F0007-027 [I,C*]; G03F0007-028 [I,A]; G03F0007-028 [I,C*]; H05K0003-00 [I,A]; H05K0003-00 [I,C*] |

AB The compds. can be converted into epoxy and radical curable derivs. such as that of novolacs, useful for coatings and **photoresists**, are phenolic compds. having aromatic-bonded alkylene groups linking to xylene groups and having alc. OH groups for improving adhesion to substrate surface without requiring strong alkali for their developing. Thus, heating α,α' -dihydroxy-p-xylene 2070 with p-hydroxyphenyl-2-ethanol 4140, p-toluenesulfonic acid 52 and PhMe 1420 parts at 100° gave a polyphenolic compound (I). Mixing I 10 with a 1,2-quinone diazide compound 6 and propylene glycol monomethyl ether acetate 24 parts gave a pos.-working **photoresist** with good developing property and heat resistance.

ST heat resistance **photoresist** xylene deriv **novolac**
 alkali developing property

IT Phenolic resins, preparation

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or

engineered material use); PREP (Preparation); USES (Uses)
(epoxy, **novolak**; manufacture of polyphenol compds. containing xylene structure and their derivs. for use in resin compns. for **photoresists**)

IT **Positive photoresists**

(manufacture of polyphenol compds. containing xylene structure and their derivs.

for use in resin compns. for **photoresists**)

IT Phenolic resins, preparation

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**novolak**; manufacture of polyphenol compds. containing xylene structure and their derivs. for use in resin compns. for **photoresists**)

IT Epoxy resins, preparation

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(phenolic, **novolak**; manufacture of polyphenol compds. containing xylene structure and their derivs. for use in resin compns. for **photoresists**)

IT Phenols, preparation

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polymers; manufacture of polyphenol compds. containing xylene structure and their derivs. for use in resin compns. for **photoresists**)

IT **79-10-7DP**, Acrylic acid, esters with xylene-containing **novolac**

epoxy resins 106-91-2DP, Glycidyl methacrylate, reaction products with **novolac** having xylene groups 478796-26-8DP, α,α' -

Dihydroxy-p-xylene-p-hydroxyphenyl-2-ethanol copolymer, glycidyl ether or/and esters with unsatd. dicarboxylic acids 478796-26-8P

478796-27-9DP, α,α' -Dihydroxy-p-xylene-p-hydroxyphenyl-2-ethanol-phenol copolymer, glycidyl ether or/and esters with unsatd.

dicarboxylic acids 478796-27-9P 478931-83-8P, α,α' -

Dihydroxy-p-xylene-p-hydroxyphenyl-2-ethanol copolymer hydrogen

tetrahydrophthalate ester 478931-84-9P, α,α' -Dihydroxy-p-

xylene-p-hydroxyphenyl-2-ethanol-phenol copolymer hydrogen

tetrahydrophthalate ester

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of polyphenol compds. containing xylene structure and their

derivs.

for use in resin compns. for **photoresists**)

L15 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:617245 CAPLUS

DN 135:187748

ED Entered STN: 24 Aug 2001

TI Quality control of **positively** working lithographic printing plates for IR lasers

IN Aono, Koichiro; Kawauchi, Ikuo; Okuno, Takashi

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-30

ICS G03F007-00; G03F007-26

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | JP 2001228623 | A2 | 20010824 | JP 2000-37437 | 20000216 |
| PRAI | JP 2000-37437 | | 20000216 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|--|---|
| JP 2001228623 | ICM | G03F007-30 |
| | ICS | G03F007-00; G03F007-26 |
| | IPCI | G03F0007-30 [ICM,7]; G03F0007-00 [ICS,7]; G03F0007-26 [ICS,7] |
| | IPCR | G03F0007-00 [I,A]; G03F0007-00 [I,C*]; G03F0007-26 [I,A]; G03F0007-26 [I,C*]; G03F0007-30 [I,A]; G03F0007-30 [I,C*] |
| AB | Quality control of lithog. printing plates prepared by developing image-forming materials comprising photosensitive layers containing alkali solution-soluble resins and light-heat converting compds. on supports by using alkali developers has been achieved by (A) a step of preparing standard alkali developers and determining their activities by desired indication, (B) a step of measuring activities of the alkali developers to be evaluated as in (A), and (C) a step of comparing the obtained activities data and, if the difference of these values exceeds a desired value, controlling the conditions of printing members in the development step according to the difference. | |
| ST | IR laser pos lithog plate quality control; alkali developer activity measurement lithog plate | |
| IT | Polyoxyalkylenes, uses RL: NUU (Other use, unclassified); USES (Uses) (developers containing; quality control of pos. lithog. printing plates for IR lasers by activities of alkali developers) | |
| IT | Phenolic resins, uses RL: DEV (Device component use); USES (Uses) (novolak , cresol-based, photosensitive liquid containing; quality control of pos. lithog. printing plates for IR lasers by activities of alkali developers) | |
| IT | Lithographic plates Photoimaging materials (quality control of pos. lithog. printing plates for IR lasers by activities of alkali developers) | |
| IT | 56347-72-9 134127-48-3 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (IR-absorbing dye; quality control of pos. lithog. printing plates for IR lasers by activities of alkali developers) | |
| IT | 50-70-4, Sorbit, uses 77-92-9, Citric acid, uses 1310-73-2, Sodium hydroxide, uses 7631-86-9, Silica, uses 12136-45-7, Potassium oxide (K2O), uses 25322-68-3, Polyethylene glycol 61792-09-4 RL: NUU (Other use, unclassified); USES (Uses) (developers containing; quality control of pos. lithog. printing plates for IR lasers by activities of alkali developers) | |
| IT | 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (monomer for polymer used in photosensitive liquid; quality control of pos. lithog. printing plates for IR lasers by activities of alkali developers) | |
| IT | 207793-01-9 216861-97-1 RL: DEV (Device component use); USES (Uses) (photosensitive liquid containing; quality control of pos. lithog. printing plates for IR lasers by activities of alkali developers) | |
| IT | 124996-93-6P, Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl methacrylate copolymer RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses) (photosensitive liquid containing; quality control of pos. lithog. printing plates for IR lasers by activities of alkali developers) | |
| IT | 63-74-1, p-Aminobenzenesulfonamide RL: RCT (Reactant); RACT (Reactant or reagent) (reactant for monomer for polymer used in photosensitive liquid; quality control of pos. lithog. printing plates for IR lasers by | |

activities of alkali developers)
 IT 79-41-4, Methacrylic acid, reactions 541-41-3, Ethyl
 chloroformate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material for monomer for polymer used in
photosensitive liquid; quality control of pos. lithog. printing
 plates for IR lasers by activities of alkali developers)

L15 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2000:837030 CAPLUS
 DN 134:35045
 ED Entered STN: 30 Nov 2000
 TI **Positive-working photosensitive** composition useful as
 lithographic plate material
 IN Nakamura, Tatsuo; Kunita, Kazuto; Kitatani, Katsushi
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 34 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G03F007-004
 ICS B41N001-14; G03F007-039
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

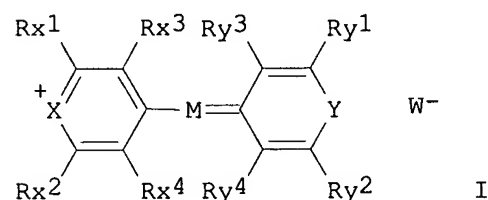
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 2000330271 | A2 | 20001130 | JP 1999-141993 | 19990521 |
| | US 6602645 | B1 | 20030805 | US 2000-573159 | 20000519 |
| PRAI | JP 1999-141993 | A | 19990521 | | |
| | JP 1999-165506 | A | 19990611 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|---|
| JP 2000330271 | ICM | G03F007-004 |
| | ICS | B41N001-14; G03F007-039 |
| | IPCI | G03F0007-004 [ICM,7]; B41N0001-14 [ICS,7]; G03F0007-039 [ICS,7] |
| | IPCR | B41N0001-12 [I,C*]; B41N0001-14 [I,A]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-039 [I,A]; G03F0007-039 [I,C*] |
| US 6602645 | IPCI | G03F0007-039 [ICM,7] |
| | IPCR | B41C0001-10 [I,A]; B41C0001-10 [I,C*] |
| | NCL | 430/270.100; 101/467.000; 430/302.000; 430/964.000 |
| | ECLA | B41C001/10A2 |

OS MARPAT 134:35045
 GI



AB The title **photosensitive** composition contains an acidic group-containing polymer and a IR absorbent of the general formula I (X, Y = O, S, Se, Te; M = methine having ≥ 5 conjugated C atoms; Rx1-x4, Ry1-y4 = H, halo, CN, alkyl, aryl, alkenyl, alkynyl, carbonyl, thio, sulfonyl, sulfinyl, oxy, amino; W- = anion) and the solubility to aqueous alkali solns. of the composition

is suppressed prior to irradiation with IR rays, but it becomes soluble in the solns. after irradiation with IR rays. The composition shows high sensitivity toward IR ray lasers, development latitude, and storage stability.

ST polymer acidic group presensitized lithog plate; IR absorbent methine dye lithog plate

IT Optical materials

(IR absorbers; pos. **photosensitive** composition containing polymer with acidic group and IR absorbent for lithog. plate)

IT IR materials

(absorbers; pos. **photosensitive** composition containing polymer with acidic group and IR absorbent for lithog. plate)

IT Phenolic resins, uses

RL: DEV (Device component use); USES (Uses)

(**novolak**; pos. **photosensitive** composition containing polymer with acidic group and IR absorbent for lithog. plate)

IT Lithographic plates

(presensitized; pos. **photosensitive** composition containing polymer with acidic group and IR absorbent for lithog. plate)

IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 56347-72-9

173783-73-8 310896-27-6 310896-29-8 310896-31-2 310896-33-4

310896-34-5 310896-36-7 310896-37-8 310896-39-0 310896-41-4

310896-43-6 310896-45-8 310896-46-9 310896-47-0 310896-49-2

310896-51-6 310896-52-7 310896-53-8 310896-54-9 310896-55-0

310896-56-1 310901-70-3 310901-73-6 310901-74-7

RL: DEV (Device component use); USES (Uses)

(pos. **photosensitive** composition containing polymer with acidic group and IR absorbent for lithog. plate)

IT 7791-25-5DP, Sulfuryl chloride, reaction products with cresol

novolak resin 27029-76-1DP, m-Cresol-p-cresol-formaldehyde

copolymer, reaction products with sulfuryl chloride 124996-93-6P,

Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl methacrylate copolymer 303966-00-9P 310901-72-5P

RL: DEV (Device component use); PNU (Preparation, unclassified); PREP

(Preparation); USES (Uses)

(pos. **photosensitive** composition containing polymer with acidic group and IR absorbent for lithog. plate)

IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide

RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);

RACT (Reactant or reagent)

(preparation and polymerization of)

IT 63-74-1, p-Aminobenzenesulfonamide 79-41-4, Methacrylic acid,

reactions 541-41-3, Ethyl chloroformate

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aminosulfonylphenylmethacrylamide)

IT 1161-73-5 4485-89-6 151038-73-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of methine dye IR absorbent)

L15 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:448364 CAPLUS

DN 133:81597

ED Entered STN: 05 Jul 2000

TI **Positive**-working **photosensitive** composition for IR ray lasers

IN Kimura, Takeshi; Fujita, Osamu

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-027

ICS B41N001-14; G03F007-004; G03F007-023

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 2000187318 | A2 | 20000704 | JP 1998-364091 | 19981222 |
| PRAI | JP 1998-364091 | | 19981222 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| JP 2000187318 | ICM | G03F007-027 |
| | ICS | B41N001-14; G03F007-004; G03F007-023 |
| | IPCI | G03F0007-027 [ICM,7]; B41N0001-14 [ICS,7]; G03F0007-004 [ICS,7]; G03F0007-023 [ICS,7] |
| | IPCR | B41N0001-12 [I,C*]; B41N0001-14 [I,A]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-023 [I,A]; G03F0007-023 [I,C*]; G03F0007-027 [I,A]; G03F0007-027 [I,C*] |

AB The title **photosensitive** composition contains (a) a substance which absorbs light to generate heat, (b) an aqueous alkali solution-soluble polymer having phenolic OH group(s), and (c) a polymer comprising (meth)acrylate monomers having 2 or 3 C3-20 perfluoroalkyl groups in their mols. The compns. may optionally contain copolymers containing ≥ 10 mol% of ≥ 1 monomers selected from (1) a monomer having sulfonamide groups having ≥ 1 H atom bonded onto N in a mol., (2) a monomer having an active imino group C(O)NHSO₂, and (3) hydroxystyrene, and (meth)acrylamide and (meth)acrylic acid esters having phenolic OH group(s). The composition is capable of direct platemaking from digital signals and provides high quality images with improved discrimination and shows improved development latitude.

ST IR laser pos **photosensitive** compn platemaking; fluoroacrylic polymer pos **photosensitive** compn

IT Fluoropolymers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(acrylic; pos.-working **photosensitive** composition for platemaking with IR ray lasers)

IT Phenolic resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**novolak**, cresol-based; pos.-working **photosensitive** composition for platemaking with IR ray lasers)

IT Lithographic plates
(offset; pos.-working **photosensitive** composition for platemaking with IR ray lasers)

IT **Photoimaging materials**
(**photopolymerizable**, S; pos.-working **photosensitive** composition for platemaking with IR ray lasers)

IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(pos.-working **photosensitive** composition for platemaking with IR ray lasers)

IT 124996-93-6P, Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl methacrylate copolymer
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working **photosensitive** composition for platemaking with IR ray lasers)

IT 63-74-1, p-Aminobenzenesulfonamide **79-41-4**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(pos.-working **photosensitive** composition for platemaking with IR ray lasers)

IT 117283-53-1, Victoria pure blue BOH 1-naphthalenesulfonate 134127-48-3 279681-09-3
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photosensitive** composition for platemaking with IR ray lasers)

L15 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1999:801478 CAPLUS
 DN 132:57146
 ED Entered STN: 21 Dec 1999
 TI Infrared laser-sensitive **positive**-working composition for offset
 printing plate making
 IN Miyake, Hideo; Kawachi, Ikuo
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 17 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM B41N001-14
 ICS G03F007-00; G03F007-004; G03F007-039; G03F007-20
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | JP 11348443 | A2 | 19991221 | JP 1998-155899 | 19980604 |
| PRAI | JP 1998-155899 | | 19980604 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|---|
| ----- | ---- | ----- |
| JP 11348443 | ICM | B41N001-14 |
| | ICS | G03F007-00; G03F007-004; G03F007-039; G03F007-20 |
| | IPCI | B41N0001-14 [ICM,6]; G03F0007-00 [ICS,6]; G03F0007-004 [ICS,6]; G03F0007-039 [ICS,6]; G03F0007-20 [ICS,6] |
| | IPCR | B41N0001-12 [I,C*]; B41N0001-14 [I,A]; G03F0007-00 [I,A]; G03F0007-00 [I,C*]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-039 [I,A]; G03F0007-039 [I,C*]; G03F0007-20 [I,A]; G03F0007-20 [I,C*] |

OS MARPAT 132:57146

AB The composition comprises (A) an alkali-soluble polymer, (B) a compound inhibiting the solubility of the polymer in the alkaline solution by compatibilizing with the polymer and of which the solubility-inhibiting ability decreases by heating, (C) a light-heat conversion agent, and (D) a self-reactive compound (a compound which reacts explosively by heat, abrasion, impact, etc., in absence of other compound). The material shows high sensitivity to IR laser beam and good developability and is useful for direct printing platemaking.

ST IR laser **photosensitive** compn printing platemaking; self reactive compd ablation **photosensitive** compn; alkali soluble polymer **photosensitive** compn; dissoln inhibitor **photosensitive** compn; light heat converting agent **photosensitive** compn

IT Ablation

(IR-sensitive composition containing polymer, light-heat converting compound, and self-reactive compound)

IT Phenolic resins, uses

RL: DEV (Device component use); USES (Uses)
 (novolak, cresol-based; IR-sensitive composition containing polymer, light-heat converting compound, and self-reactive compound)

IT Lithographic plates

(offset; IR-sensitive composition containing polymer, light-heat converting compound, and self-reactive compound)

IT 88-89-1, Picric acid 94-36-0, Benzoyl peroxide, uses 556-88-7, Nitroguanidine 622-37-7, Phenylazide 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 30260-66-3, Dimethylhydrazine 69415-30-1 134127-48-3

RL: DEV (Device component use); USES (Uses)

(IR-sensitive composition containing polymer, light-heat converting compound, and

self-reactive compound)
 IT 252756-70-0P 252756-71-1P, Acrylonitrile-ethyl methacrylate-N-(p-hydroxyphenyl)methacrylamide-methacrylamide copolymer
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
 (IR-sensitive composition containing polymer, light-heat converting compound, and self-reactive compound)
 IT 80-09-1, Bis(p-hydroxyphenyl)sulfone
 RL: DEV (Device component use); USES (Uses)
 (dissoln. inhibitor; IR-sensitive composition containing polymer, light-heat converting compound, and self-reactive compound)
 IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and polymerization of)
 IT 63-74-1, p-Aminobenzenesulfonamide **79-41-4**, Methacrylic acid, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of aminosulfonylphenylmethacrylamide)

L15 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1999:780998 CAPLUS
 DN 132:28663
 ED Entered STN: 10 Dec 1999
 TI **Positively**-working image-forming material
 IN Nakamura, Tatsuo; Kunita, Kazuto
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 49 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G03F007-039
 ICS B41N001-14; G03F007-004
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 38

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------|------|----------|-----------------|----------|
| PI JP 11338146 | A2 | 19991210 | JP 1998-147227 | 19980528 |
| PRAI JP 1998-147227 | | 19980528 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|---|
| JP 11338146 | ICM | G03F007-039 |
| | ICS | B41N001-14; G03F007-004 |
| | IPCI | G03F0007-039 [ICM,6]; B41N0001-14 [ICS,6]; G03F0007-004 [ICS,6] |
| | IPCR | B41N0001-12 [I,C*]; B41N0001-14 [I,A]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-039 [I,A]; G03F0007-039 [I,C*] |

AB The title material contains a polymerizable onium salt and a polymer insol. in water and soluble in aqueous alkali. The material, suitable for use in production of lithog. plate materials capable of direct platemaking, shows improved **photosensitivity** and development latitude.
 ST pos working **photoresist** lithog plate; **photoimaging** material **photopolymerizable** onium salt; water insol polymer pos working **photoresist**; aq alkali sol polymer **photoresist**
 IT Phenolic resins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (novolak; pos.-working **photoresist** containing polymerizable onium salt and water-insol. and aqueous alkali-soluble polymer)

IT Lithographic plates
Positive photoresists
(pos.-working **photoresist** containing polymerizable onium salt and water-insol. and aqueous alkali-soluble polymer)

IT Quaternary ammonium compounds, uses
Sulfonium compounds
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist** containing polymerizable onium salt and water-insol. and aqueous alkali-soluble polymer)

IT 53810-96-1P 252055-65-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; pos.-working **photoresist** containing water-insol. and aqueous alkali-soluble polymer and polymerizable onium salt from)

IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(monomer; pos.-working **photoresist** containing polymerizable onium salt and water-insol. and aqueous alkali-soluble polymer from)

IT 9016-83-5P, Formaldehyde-cresol copolymer 55187-06-9P 124996-93-6P
252055-45-1P 252055-54-2P 252055-59-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working **photoresist** containing polymerizable onium salt and water-insol. and aqueous alkali-soluble polymer)

IT 201683-64-9 201683-93-4 252055-47-3 252055-49-5 252055-53-1
252055-55-3 252055-56-4 252055-58-6 252055-60-0 252055-61-1
252055-63-3 252055-64-4
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working **photoresist** containing polymerizable onium salt and water-insol. and aqueous alkali-soluble polymer)

IT 63-74-1, p-Aminobenzenesulfonamide **79-41-4**, reactions
541-41-3, Ethyl chloroformate
RL: RCT (Reactant); RACT (Reactant or reagent)
(pos.-working **photoresist** containing polymerizable onium salt and water-insol. and aqueous alkali-soluble polymer from)

IT 106-95-6, reactions 121-44-8, reactions 825-90-1 1073-67-2
2695-37-6 41532-84-7 61010-04-6 141914-99-0 180574-69-0
252055-66-6 252055-67-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(pos.-working **photoresist** containing water-insol. and aqueous alkali-soluble polymer and polymerizable onium salt from)

L15 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:210693 CAPLUS

DN 126:205486

ED Entered STN: 31 Mar 1997

TI **Positively** resist composition with high sensitivity and good heat resistance for manufacture of integrated circuit

IN Sato, Kazufumi; Nitsuta, Kazuyuki; Yamazaki, Akyoshi; Sakai, Tomoaki; Nakayama, Toshimasa

PA Tokyo Ohka Kogyo Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-039

ICS G03F007-004; G03F007-016; G03F007-023; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|-------------|------|----------|-----------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | JP 09006003 | A2 | 19970110 | JP 1995-175639 | 19950620 |

JP 3553213 B2 20040811
 PRAI JP 1995-175639 19950620
 CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|--|
| JP 09006003 | ICM | G03F007-039 |
| | ICS | G03F007-004; G03F007-016; G03F007-023; H01L021-027 |
| | IPCI | G03F0007-039 [ICM,6]; G03F0007-004 [ICS,6]; G03F0007-016 [ICS,6]; G03F0007-023 [ICS,6]; H01L0021-027 [ICS,6] |

AB The composition contains (A) alkali-soluble polymer mixts. of a **novolak** resin whose 1-50 mol% OH groups are substituted by tert-butoxycarbonyloxy groups and polyhydroxystyrene whose 10-60 mol% OH groups are substituted by OCR1R2OR3 (R1 = H, Me; R2 = Me, Et; R3 = lower alkyl), (B) radiation-induced acid-generating compound, and (C) an organic carboxylic acid. The composition showed high sensitivity and resolution and good heat resistance.

ST resist pos butoxycarbonyloxy **novolak** heat resistance; integrated circuit resist butoxycarbonyloxy **novolak**; polyhydroxystyrene resist pos **novolak** resin blend

IT Integrated circuits

Photoresists

(high-sensitivity pos. resist containing butoxycarbonyloxyated **novolak** resin for manufacture of integrated circuit)

IT Polymer blends

RL: TEM (Technical or engineered material use); USES (Uses)

(high-sensitivity pos. resist containing butoxycarbonyloxyated **novolak** resin for manufacture of integrated circuit)

IT Phenolic resins, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(**novolak**; high-sensitivity pos. resist containing butoxycarbonyloxyated **novolak** resin for manufacture of integrated circuit)

IT 138529-81-4, Bis(cyclohexylsulfonyl)diazomethane

RL: TEM (Technical or engineered material use); USES (Uses)

(acid generator; high-sensitivity pos. resist containing butoxycarbonyloxyated **novolak** resin for manufacture of integrated circuit)

IT 7081-78-9DP, 1-Chloro-1-ethoxyethane, reaction products with polyhydroxystyrene 24424-99-5DP, Di-tert-butyl dicarbonate, reaction products with **novolak** resin 155214-68-9P 155420-66-9P

RL: PNU (Preparation, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(high-sensitivity pos. resist containing butoxycarbonyloxyated **novolak** resin for manufacture of integrated circuit)

IT 69-72-7, o-Hydroxybenzoic acid, uses 79-10-7, 2-Propenoic acid, uses 79-41-4, uses 110-16-7, 2-Butenedioic acid (Z)-, uses 110-17-8, 2-Butenedioic acid (E)-, uses 142-45-0, Acetylenedicarboxylic acid 471-25-0, Propiolic acid 503-64-0, Isocrotonic acid 590-93-2, 2-Butynoic acid 591-80-0, 4-Pentenoic acid 625-38-7, 3-Butenoic acid 1076-97-7, 1,4-Cyclohexanedicarboxylic acid 1127-08-8, 1,1-Cyclohexanedicarboxylic acid 1687-30-5, 1,2-Cyclohexanedicarboxylic acid 3724-65-0, 2-Butenoic acid 3971-31-1, 1,3-Cyclohexanedicarboxylic acid 4355-11-7, 1,1-Cyclohexanediacetic acid 187820-88-8, SAX

RL: TEM (Technical or engineered material use); USES (Uses)

(high-sensitivity pos. resist containing butoxycarbonyloxyated **novolak** resin for manufacture of integrated circuit)

L15 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:180359 CAPLUS

DN 126:285197

ED Entered STN: 17 Mar 1997

TI Bilayer resist approach for 193-nm lithography

AU Schaedeli, Ulrich; Tinguely, Eric; Blakeney, Andrew J.; Falcigno,

Pasquale; Kunz, Roderick R.

CS Ciba-Geigy Ltd, Marly Research Center, Marly, 1723, Switz.

SO Proceedings of SPIE-The International Society for Optical Engineering
(1996), 2724(Advances in Resist Technology and Processing XIII), 344-354
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 35, 36, 76

AB Tremendous efforts to extend optical lithog. beyond the quarter micrometer
boundary, which is currently achievable with KrF-excimer laser lithog.,
are ongoing. 193 Nm lithog., using ArF-excimer lasers, is believed to be
the technol. of choice to approach the ambitious sub-0.2 μm resolution
target. Single layer, pos. tone resist systems, which can be developed
with aqueous base, would be preferred. However, it might well turn out that
the targeted requirements can only be fulfilled by resist systems which
involve some type of dry etch steps. This paper will focus on a pos. tone
bilayer resist system, which is based on novel silicon containing methacrylate
polymers bearing acid labile side groups. Due to a unique combination of
monomeric building blocks, polymers with high silicon concns. and, at the
same time, high thermal flow stability are obtained. Hardbaked
novolac is used as the planarizing layer. Resists systems based
on the new silicon containing polymers demonstrated 0.175 μm resolution
capability, a thermal flow stability $>120^{\circ}\text{C}$, and an etch
selectivity ratio >20 .

ST microlithog bilayer resist chem amplification

IT **Positive photoresists**
(UV; bilayer resist approach for 193-nm lithog.)

IT Integrated circuits
(bilayer resist approach for 193-nm lithog.)

IT Sputtering
(etching, reactive; preparation of methacrylic **photoresists**)

IT Polymerization
(radical; preparation of methacrylic **photoresists**)

IT Etching
(sputter, reactive; preparation of methacrylic **photoresists**)

IT **Photolithography**
(submicron UV; bilayer resist approach for 193-nm lithog.)

IT 75-65-0, tert-Butanol, reactions **79-41-4**, Methacrylic acid,
reactions 109-92-2, Ethyl vinyl ether 109-93-3, Vinyl ether 110-87-2
920-46-7, Methacryloyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of methacrylic **photoresists**)

IT 585-07-9P, tert-Butyl methacrylate 51920-52-6P, 2-Propenoic acid,
2-methyl-, 1-ethoxyethyl ester 52858-59-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation of methacrylic **photoresists**)

IT 151372-04-2 181468-99-5 181469-03-4
RL: TEM (Technical or engineered material use); USES (Uses)
(silicon-containing methacrylate **photoresists**)

L15 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1996:753530 CAPLUS

DN 126:39726

ED Entered STN: 23 Dec 1996

TI **Positive-working photoresist** composition and control
of its dissolution rate

IN Sugama, Eriko; Tamura, Akira

PA Toppan Printing Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF

DT Patent

LA Japanese
 IC ICM G03F007-022
 ICS G03F007-023; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 08272089 | A2 | 19961018 | JP 1995-74345 | 19950331 |
| PRAI | JP 1995-74345 | | 19950331 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|---|
| JP 08272089 | ICM | G03F007-022 |
| | ICS | G03F007-023; H01L021-027 |
| | IPC | G03F0007-022 [ICM,6]; G03F0007-023 [ICS,6]; H01L0021-027 [ICS,6] |

AB The title composition contains an alkali-soluble resin, a 1,2-naphthoquinonediazide-type **photosensitive** agent, and (A) ≥ 1 acid selected from benzenesulfonic acid, p-toluenesulfonic acid, benzoic acid, phthalic acid, o-, m-, and p-toluic acids, and salicylic acid or (B) ≥ 1 compound selected from quaternary ammonium salts, methacrylic acid, acrylic ester polymers, polyester resins, epoxy resins, and urethane resins. The acids (A) take role as dissoln. accelerator and the agents (B) as dissoln. retardants. These compds. can control the dissoln. rate of the composition without adverse effects on the properties as resist.

ST pos working **photoresist** dissoln rate control; acid addn pos working **photoresist**; quaternary ammonium salt **photoresist**; alkali sol pos working **photoresist**; methacrylic acid pos working **photoresist**; acrylate ester pos working **photoresist**; polyester addn pos working **photoresist**; epoxy resin pos working **photoresist**; polyurethane addn pos working **photoresist**; accelerator retardant dissoln **photoresist**

IT Epoxy resins, uses
 Polyesters, uses
 Polyurethanes, uses
 Quaternary ammonium compounds, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (dissoln. retardants; pos. working **photoresist** containing alkali-soluble components and dissoln. accelerator or retardant)

IT Phenolic resins, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (novolak, cresol-based; pos. working **photoresist** containing alkali-soluble components and dissoln. accelerator or retardant)

IT Dissolution
Photoresists
 (pos. working **photoresist** containing alkali-soluble components and dissoln. accelerator or retardant)

IT 65-85-0, Benzoic acid, uses 69-72-7, Salicylic acid, uses 88-99-3, 1,2-Benzenedicarboxylic acid, uses 98-11-3, Benzenesulfonic acid, uses 99-04-7, m-Toluic acid 99-94-5, p-Toluic acid 104-15-4, p-Toluenesulfonic acid, uses 118-90-1, o-Toluic acid
 RL: MOA (Modifier or additive use); USES (Uses)
 (dissoln. accelerator; pos. working **photoresist** containing alkali-soluble components and dissoln. accelerator or retardant)

IT 79-10-7D, 2-Propenoic acid, ester, polymers, uses 79-41-4, uses 1923-70-2, Tetrabutylammonium perchlorate
 RL: MOA (Modifier or additive use); USES (Uses)
 (dissoln. retardants; pos. working **photoresist** containing alkali-soluble components and dissoln. accelerator or retardant)

IT 68510-93-0
 RL: TEM (Technical or engineered material use); USES (Uses)

(**photosensitive**; pos. working **photoresist** containing
alkali-soluble components and dissoln. accelerator or retardant)

L15 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:672463 CAPLUS
DN 125:312433
ED Entered STN: 14 Nov 1996
TI **Positive**-working **photoresist** composition with
high-resolution for good profile
IN Suzuki, Nobuo; Yamanaka, Tsukasa; Aoso, Toshiaki; Kato, Eiichi
PA Fuji Photo Film Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 63 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-039
ICS G03F007-004; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--------------|------|----------|-----------------|----------|
| PI | JP 08202038 | A2 | 19960809 | JP 1995-7759 | 19950120 |
| PRAI | JP 1995-7759 | | 19950120 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|---|
| JP 08202038 | ICM | G03F007-039 |
| | ICS | G03F007-004; H01L021-027 |
| | IPCI | G03F0007-039 [ICM,6]; G03F0007-004 [ICS,6]; H01L0021-027 [ICS,6] |

AB The title composition comprises (1) a resin insol. in water but soluble in an
aqueous

alkaline solution, (2) a compound capable of generating an acid on being
irradiated

with an actinic ray or a radiation, (3) an acid dissociation-suppressing
compound, and (4) block copolymer, wherein the acid dissociation-suppressing
compound has a mol. weight $\leq 3,000$, has acid-dissociable groups, and
shows acid-caused increasing solubility in the alkaline solution The
copolymer has a

segment (A) based on $\geq 50\%$ of a F- or Si-containing monomer and a
segment (B) containing 0-20% of the F- or Si-containing monomer.

ST pos working **photoresist** compn

IT Fluoropolymers

Siloxanes and Silicones, preparation

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)

(acrylic, block and graft copolymers containing; prepared and contained in
pos.-working **photoresist** composition)

IT Phenolic resins, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(**novolak**, contained in pos.-working **photoresist**
composition)

IT Resists

(**photo**-, pos.-working, containing acid dissociation-suppressing
compound and block copolymer)

IT 52754-92-4 66003-78-9 124737-97-9 124738-06-3 153698-46-5
153698-67-0 176109-33-4 177786-96-8 177786-98-0

RL: TEM (Technical or engineered material use); USES (Uses)
(acid generating agent contained in pos.-working **photoresist**
composition)

IT 24979-74-6, p-Hydroxystyrene-styrene copolymer 133685-94-6,
o-Hydroxystyrene-p-hydroxystyrene copolymer 149642-75-1,
p-Hydroxystyrene-4-vinylpyridine copolymer 171429-59-7, p-Acetoxy
styrene-p-hydroxystyrene copolymer 178067-74-8

RL: TEM (Technical or engineered material use); USES (Uses)
 (contained in pos.-working **photoresist** composition)

IT 4466-18-6 26505-28-2 27955-94-8 31171-18-3 51866-54-7 51866-62-7
 76937-83-2 102826-48-2 110726-28-8 148452-55-5 148517-26-4

RL: TEM (Technical or engineered material use); USES (Uses)
 (dissociation-suppressing compound contained in pos.-working
photoresist composition)

IT 150551-83-0 150551-84-1 150551-85-2 150551-86-3 150551-87-4
 150551-88-5 150551-90-9 150551-91-0 150551-92-1 150551-93-2
 155293-25-7 183060-70-0

RL: CAT (Catalyst use); USES (Uses)
 (initiator for preparation of star-type block copolymer for pos.-working
photoresist composition)

IT 79-41-4DP, fluoroalkyl esters, graft copolymers with Me
 (meth)acrylates 80-62-6DP, graft copolymers with fluoroalkyl
 methacrylates and Me acrylate 96-33-3DP, Methyl acrylate, graft
 copolymers with fluoroalkyl methacrylates and Me methacrylate
 144541-84-4P 150624-67-2P 150624-69-4P 150624-73-0P 150624-74-1P
 150625-09-5P 150652-03-2P 150737-10-3P 169046-25-7P 183060-58-4P
 183060-62-0P 183060-63-1P 183060-65-3P 183060-66-4P 183060-67-5P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (prepared and contained in pos.-working **photoresist** composition)

IT 150624-68-3P 150624-77-4P, 2,2,3,4,4,4-Hexafluoro butyl
 methacrylate-methyl methacrylate graft copolymer 150625-00-6P
 150625-01-7P 150625-03-9P 150625-07-3P 150625-13-1P 150625-16-4P
 150625-18-6P 150625-22-2P 150642-22-1P 150642-23-2P 150642-24-3P
 172835-72-2P 183060-60-8P 183060-61-9P

RL: PNU (Preparation, unclassified); PREP (Preparation)
 (prepared for pos.-working **photoresist** composition)

IT 183060-68-6P

RL: PNU (Preparation, unclassified); PREP (Preparation)
 (star-type block copolymer prepared for pos.-working **photoresist**
 composition)

L15 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1996:485266 CAPLUS

DN 125:127850

ED Entered STN: 15 Aug 1996

TI **Positive**-working **photosensitive** composition and
 manufacture of lithographic plate

IN Kawachi, Ikuo

PA Fuji Photo Film Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-039

ICS G03F007-00; G03F007-022; G03F007-023; G03F007-033; G03F007-035

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 08123029 | A2 | 19960517 | JP 1994-263862 | 19941027 |
| | JP 3335015 | B2 | 20021015 | | |
| PRAI | JP 1994-263862 | | 19941027 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|---|
| JP 08123029 | ICM | G03F007-039 |
| | ICS | G03F007-00; G03F007-022; G03F007-023; G03F007-033; G03F007-035 |
| | IPCI | G03F0007-039 [ICM,6]; G03F0007-00 [ICS,6]; G03F0007-022 [ICS,6]; G03F0007-023 [ICS,6]; G03F0007-033 [ICS,6]; |

- AB The composition comprises (a) an polymer with a sulfonamide group and insol. in water and soluble in an alkaline aqueous solution, (b) an alkali-soluble novolak resin, (c) a pos.-working **photosensitive** compound, and (d) a cyclic lactone. A pos.-working presensitized lithog. plate is prepared by coating the composition on a substrate and drying. The plate shows good development latitude, abrasion resistance, printing durability without burning treatment, and chemical resistance.
- ST lithog plate presensitized cyclic lactone; **photosensitive** compn sulfonamide group polymer
- IT Lithographic plates
(pos.-working **photosensitive** compns. containing cyclic lactones for preparation of)
- IT Urethane polymers
RL: DEV (Device component use); USES (Uses)
(pos.-working **photosensitive** compns. for lithog. plate preparation containing cyclic lactones and)
- IT 124996-94-7, N-(p-Aminosulfonylphenyl)methacrylamide-ethyl methacrylate-methacrylic acid copolymer 124996-96-9 179695-30-8
RL: DEV (Device component use); USES (Uses)
(pos.-working presensitized lithog. plate containing cyclic lactone and polymer with sulfonamide group)
- IT 96-48-0, γ -Butyrolactone
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(pos.-working presensitized lithog. plate containing cyclic lactone and polymer with sulfonamide group)
- IT 62814-37-3P, N-(p-Aminosulfonylphenyl)methacrylamide-methyl methacrylate copolymer 124996-93-6P, Acrylonitrile-N-(p-Aminosulfonylphenyl)methacrylamide-ethyl methacrylate copolymer 124996-98-1P 179695-31-9P
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(pos.-working presensitized lithog. plate containing cyclic lactone and polymer with sulfonamide group)
- IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide 124996-97-0P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation and polymerization of)
- IT 63-74-1, p-Aminobenzenesulfonamide 79-41-4, reactions 920-46-7, Methacrylic acid chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of aminosulfonylphenylmethacrylamide)
- IT 17872-58-1P 179695-32-0P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of dihydroxymethylethylcarbonylaminobenzenesulfonamide)
- IT 108-24-7, Acetic anhydride 4767-03-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of dihydroxymethylethylcarbonylaminobenzenesulfonamide)

=> D HIS

(FILE 'HOME' ENTERED AT 19:14:15 ON 23 JUN 2006)

FILE 'REGISTRY' ENTERED AT 19:14:32 ON 23 JUN 2006

L1 1 S METHACRYLIC ACID/CN
L2 46112 S 79-41-4/CRN
L3 0 S ACRYLIC ACID/CRN
L4 1 S ACRYLIC ACID/CN
L5 0 S 79/10/7/CRN
L6 59563 S 79-10-7/CRN

FILE 'CAPLUS' ENTERED AT 19:15:44 ON 23 JUN 2006

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L7      26806 S (NOVOLAK OR NOVALAK OR NOVOLAC OR NOVOLAK) OR ((PHENOL CRESOL
L8      53490 S L1 OR L4
L9      592 S L8 AND L7
L10     2 S L9 AND ACETAL
L11     0 S L9 AND POLYACETAL
L12     6 S L9 AND PHOTOACID
L13     0 S L11 AND PHOTO?
L14     319 S L9 AND PHOTO?
L15     16 S L14 AND POSITIV?

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FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| -18.00 | -18.00 |

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